

ACUTE CARE HOSPITAL UTILIZATION TRENDS IN MASSACHUSETTS FY2009- 2012

MASSACHUSETTS RESIDENTS



Introduction

The Center for Health Information and Analysis (CHIA) is publishing these statewide and regional inpatient, emergency department and observation stay utilization statistics of Massachusetts residents who have been discharged from Massachusetts acute care hospitals for the period beginning in Hospital Fiscal Year (FY) 2009 through 2012.

These charts and tables can be used in conjunction with the associated data book. Over time, CHIA will release reports on trends resulting from this report and update this report to include additional years of data.

This analysis was produced using CHIA's Acute Hospital Case Mix Databases which are comprised of patient level discharge data submitted by Massachusetts acute hospitals prior to payment by a public payer or private insurer.

To learn more about the data and process used in the development of this report, please see the technical appendix.

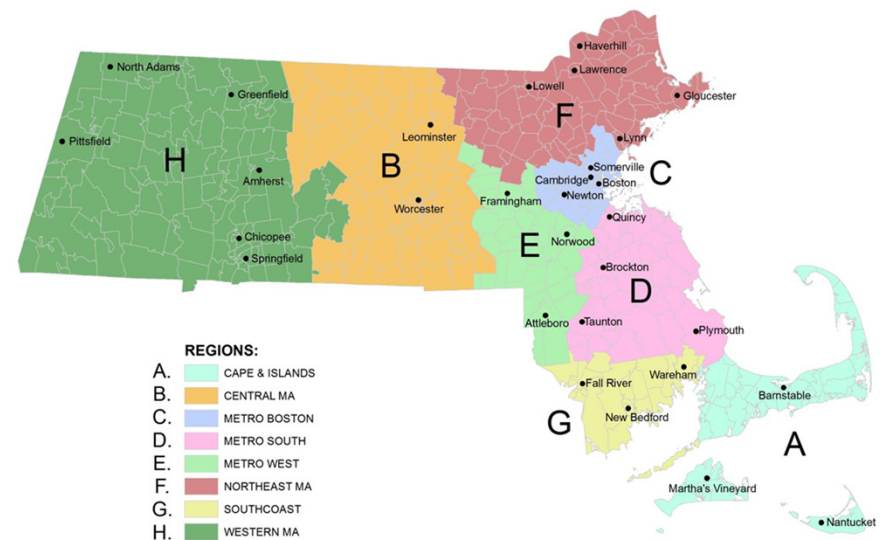
STATEWIDE REPORTING



Statewide

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Overview of Massachusetts Demographics

According to the U.S. Census Bureau's American Community Survey (ACS) population estimates from 2008-2012, Massachusetts residents represented 2.1% of the total U.S. population. The racial composition of Massachusetts was less diverse compared to the U.S. population, with 81.0% of the Massachusetts population identified as White compared to 74.2% of the U.S. population. In terms of ethnicity, an estimated 9.6% of Massachusetts residents were Hispanic or Latino compared to 16.4% of the U.S. population. Finally, Massachusetts had a higher mean household income of \$89,965 and a lower percentage of the population living below poverty level (10.6%) than the U.S. population estimates of \$73,034 and 14.5% respectively.

Statewide Acute Care Hospital Utilization, 2009 - 2012

In 2012, there were more than 780,000 inpatient discharges, 2.42 million emergency department discharges and 180,000 observation stay discharges for Massachusetts residents from Massachusetts acute care hospitals.

Inpatient discharges

From 2009 to 2012, inpatient discharges declined by 3.0%. Substance Abuse inpatient discharges increased by 8.7% from 2009 to 2012, while all other service category discharges decreased during this same period. In 2012, the combination of inpatient discharges for Medical and Surgical services accounted for 73.1% of total inpatient discharges; Maternity and Newborn discharges represented 19.0% of total inpatient discharges; and Mental Health and Substance Abuse service discharges accounted for 7.4% of all inpatient discharges.

There were differences in inpatient discharge trends from 2009 to 2012 by payer type. Commercial inpatient discharges declined each year between 2009 and 2012. Medicare inpatient discharges increased each year from 2009 to 2011, but decreased in 2012 to below 2009 levels. Medicaid inpatient discharges decreased from 2009 to 2010, then increased between 2010 and 2012.

Emergency department discharges

Emergency department discharges increased modestly (1.6%) between 2011 and 2012, after declining each year between 2009 and 2011. Commercial emergency department discharges declined each year, while Medicaid and Medicare emergency department discharges increased each year since 2009.

Notes: The payer type is derived using the primary payer information reported by the hospital at the time of patient discharge and may change upon payment by the insurer or payer. Trends in total discharges by payer type may be the result of changes in the number of members enrolled in each payer type category.

Statewide Acute Care Hospital Utilization, 2009 - 2012

The racial composition of emergency department discharges for 2012 differed from the Massachusetts American Community Survey (ACS) demographic estimates. In 2012, 81.0% of the Massachusetts population was White but represented 71.9% of emergency department discharges, 6.8% of the population was Black/African American but accounted for 11.4% of emergency department discharges, and 5.4% of the population was Asian but represented 2.0% of emergency department discharges. There was a higher percentage of emergency department discharges for patients who identified as Hispanic or Latino (15.0%) compared to the population estimate of 9.6%.

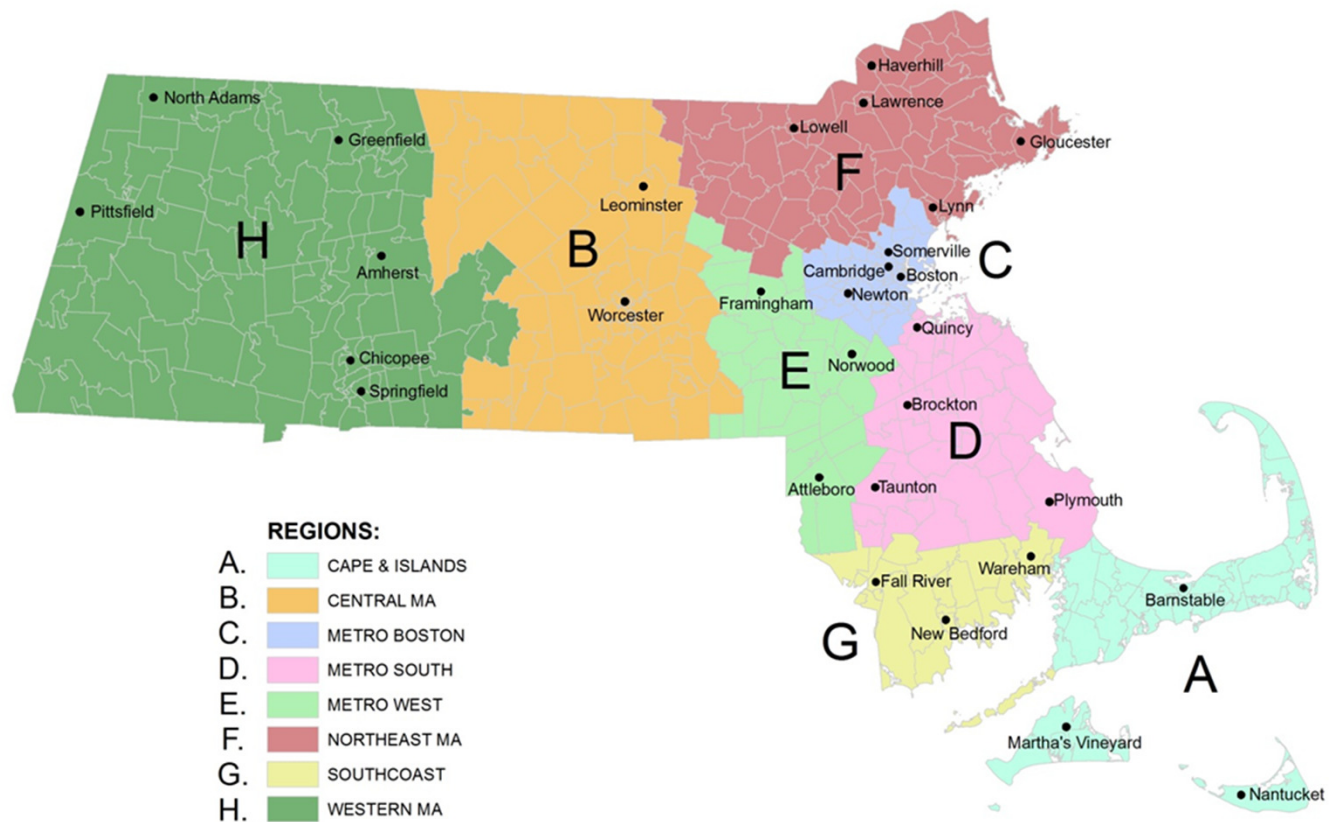
Observation Stay Discharges

The number of observation stay discharges increased by 20.3% from 2009 through 2012. Between 2011 and 2012 alone, observation stay discharges increased by 12.2%.

Between 2009 and 2012, Medicare observation stay discharges increased by 42.7% and Medicaid observation stay discharges increased by 25.4%. However, Commercial observation stay discharges held steady (-0.1%.) during this same period.

Notes: The payer type is derived using the primary payer information reported by the hospital at the time of patient discharge and may change upon payment by the insurer or payer. Trends in total discharges by payer type may be the result of changes in the number of members enrolled in each payer type category.

Statewide Map



MA Population at a Glance



Demographics*		Massachusetts	US
Total Population		6,560,595 (2.1% of the US population)	309,138,711
Gender			
	<i>Male</i>	48.4%	49.2%
	<i>Female</i>	51.6%	50.8%
Age			
	<i>0-19</i>	24.7%	26.9%
	<i>20-44</i>	33.8%	33.6%
	<i>45-64</i>	27.7%	26.4%
	<i>65-84</i>	11.7%	11.5%
	<i>85+</i>	2.2%	1.8%
Race			
	<i>White</i>	81.0%	74.2%
	<i>Black/African American</i>	6.8%	12.6%
	<i>Asian</i>	5.4%	4.8%
	<i>Other**</i>	4.2%	5.8%
	<i>Two or More Races</i>	2.6%	2.7%
Ethnicity			
	<i>Hispanic or Latino</i>	9.6%	16.4%
Income			
	<i>Mean Household Income</i>	\$89,965	\$73,034
	<i>Below Poverty Level</i>	10.6%	14.5%

*Source: American Community Survey 5-year Estimate (2008-2012) U.S. Department of Commerce United States Census Bureau <http://factfinder2.census.gov>

**Includes Native and Pacific Islander and American Indian/Alaskan Native

MA Population at a Glance



Demographics*	Cape and Islands	Central MA	Metro Boston	Metro South	Metro West	Northeast MA	Southcoast	Western MA	MA
Total Population	243,825	748,734	1,541,317	809,553	656,850	1,400,816	339,924	819,572	6,560,595
% of Massachusetts population	3.7%	11.4%	23.5%	12.3%	10.0%	21.4%	5.2%	12.5%	100.0%
Gender									
Male	47.9%	49.2%	47.9%	48.3%	49.3%	48.6%	48.0%	47.9%	48.4%
Female	52.1%	50.8%	52.1%	51.7%	50.7%	51.4%	52.0%	52.1%	51.6%
Age Distribution									
0-19	19.7%	26.3%	22.2%	25.4%	26.9%	26.1%	23.5%	25.5%	24.7%
20-44	24.1%	32.6%	42.8%	31.3%	30.5%	30.7%	32.4%	31.4%	33.8%
45-64	32.2%	28.1%	23.0%	29.2%	29.8%	29.3%	27.9%	28.3%	27.7%
65-84	20.9%	10.7%	10.1%	12.1%	10.9%	11.7%	13.5%	12.3%	11.7%
85+	3.1%	2.2%	1.9%	2.0%	1.9%	2.2%	2.9%	2.6%	2.2%
Race									
White	93.2%	86.7%	67.5%	83.4%	88.5%	82.2%	88.3%	83.8%	81.0%
Black/African American	2.4%	4.2%	13.9%	8.7%	3.0%	3.1%	3.7%	5.9%	6.8%
Asian	1.1%	4.0%	9.8%	4.1%	4.6%	6.1%	1.5%	2.4%	5.4%
Other Races**	1.5%	2.9%	4.8%	2.0%	2.1%	6.4%	3.8%	5.7%	4.2%
Two or More Races	1.8%	2.3%	4.1%	1.8%	1.9%	2.1%	2.8%	2.2%	2.6%
Ethnicity									
Hispanic or Latino	2.4%	9.6%	13.1%	3.5%	4.6%	11.2%	7.1%	13.6%	9.6%
Income									
Mean Household Income	\$81,309	\$79,956	\$96,304	\$89,476	\$109,717	\$101,085	\$63,919	\$67,731	\$89,965
Poverty Level (%)	9.0%	10.2%	14.0%	7.6%	5.4%	8.6%	14.7%	14.2%	10.6%

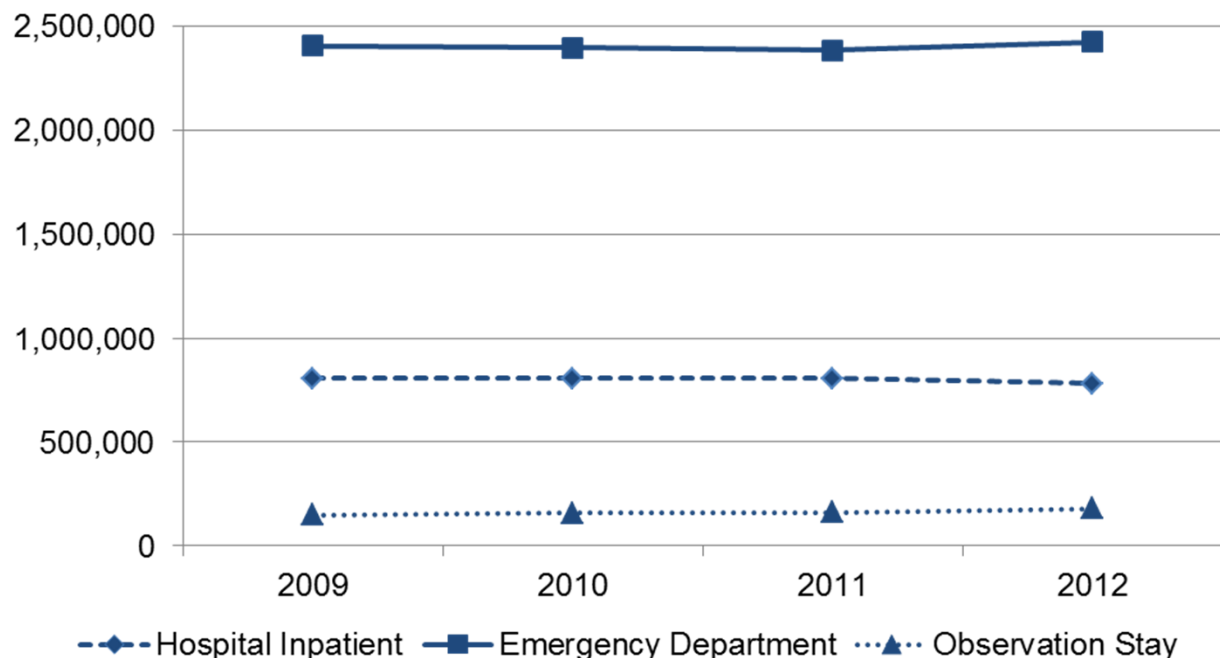
*Source: American Community Survey 5-year Estimate (2008-2012) U.S. Department of Commerce United States Census Bureau <http://factfinder2.census.gov>

**Includes Native and Pacific Islander and American Indian/Alaskan Native

Acute Care Hospital Utilization Trends - Statewide



Trends in Acute Hospital Discharges (FY2009-2012)



From 2011 to 2012, inpatient discharges declined by 2.9%. Observation stay discharges rose by 12.2% during the same period; this represented the largest single-year increase since observation stay discharges first began to rise annually in 2006. Emergency department discharges increased by 1.6% in 2012 after declining the three previous years.

Trends in Acute Hospital Discharges (FY2009-2012)

	Discharges				% Change	
	2009	2010	2011	2012	2011-2012	2009-2012
Inpatient Discharges	806,061	804,566	805,402	781,654	-2.9%	-3.0%
Emergency Department Discharges	2,406,729	2,396,895	2,384,166	2,423,076	1.6%	0.7%
Observation Stay Discharges	150,204	157,149	161,055	180,722	12.2%	20.3%
Total	3,362,994	3,358,610	3,350,623	3,385,452	1.0%	0.7%

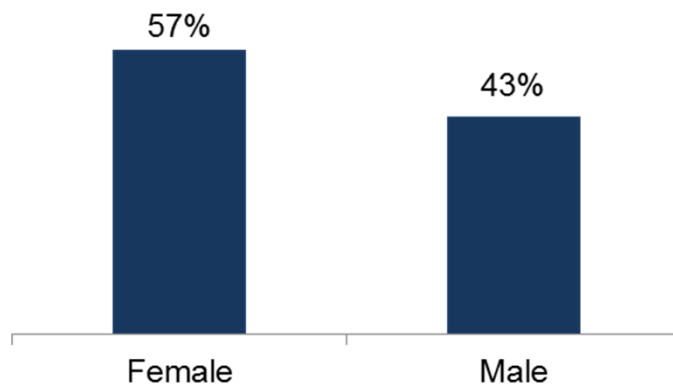
STATEWIDE ANALYSIS

INPATIENT DISCHARGES

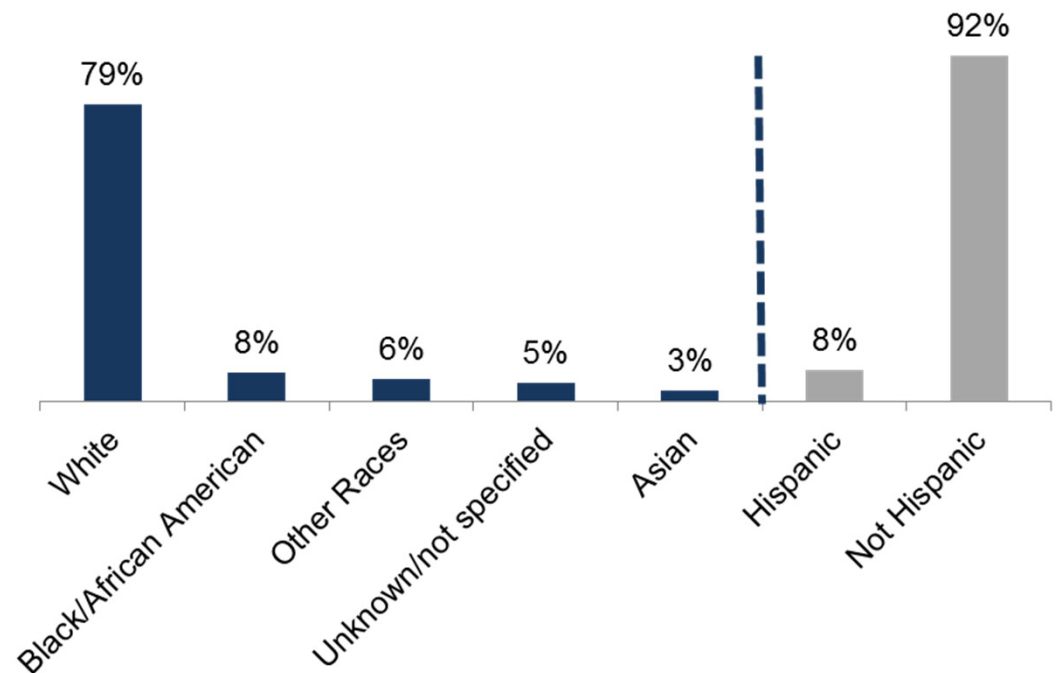


Inpatient Discharges Trends by Demographic Summary (FY2012) - Statewide

Gender



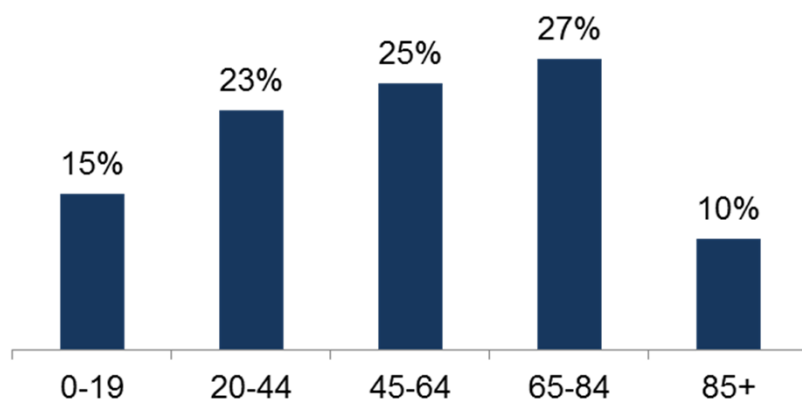
Race and Hispanic or Latino Ethnicity



Inpatient Discharges Trends by Demographic Summary - Statewide

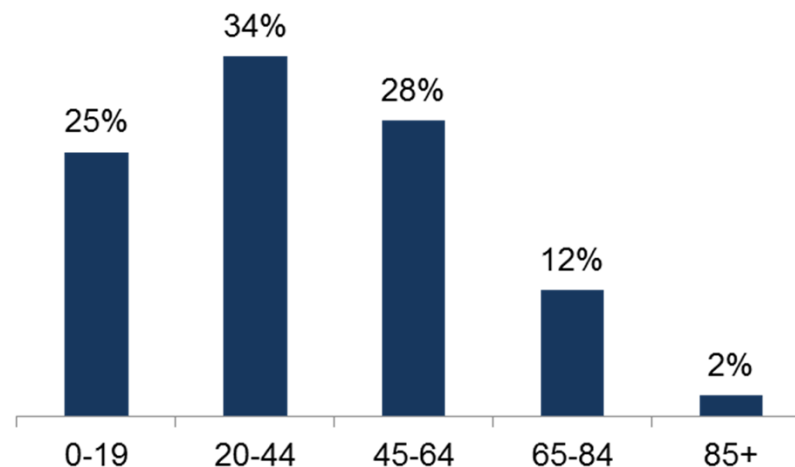


Inpatient Discharges by Age (FY2012)



The age group 65 and older accounted for approximately 37% of inpatient discharges in 2012.

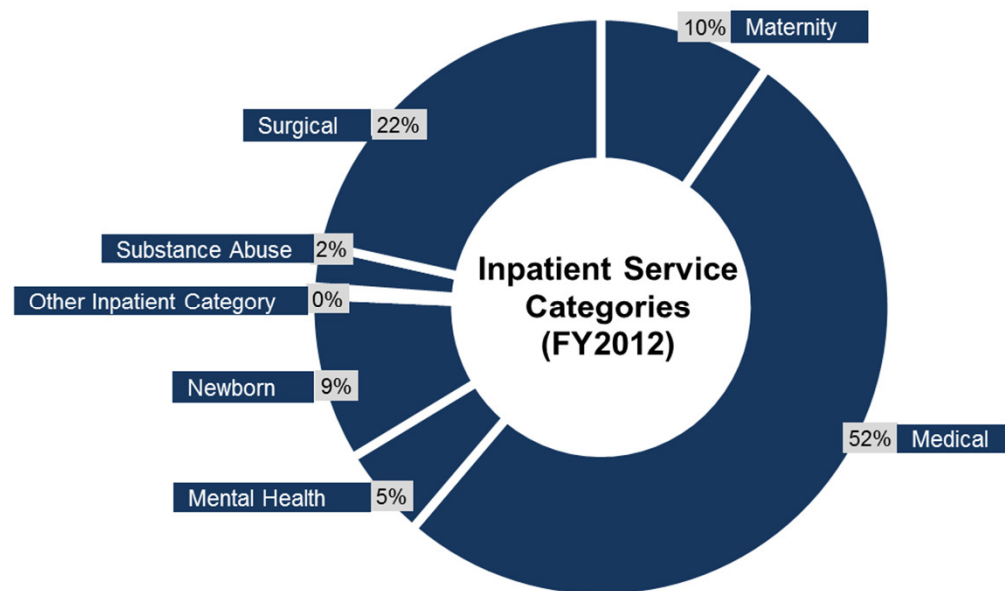
Population Estimates by Age*



* American Community Survey 5-year Estimate (2008-2012) U.S. Department of Commerce United States Census Bureau <http://factfinder2.census.gov>
Estimates may not add up to 100% due to rounding.

Percentage of Inpatient Discharges by Service Categories (FY2012) – Statewide

In 2012, the combination of inpatient discharges for Medical and Surgical services accounted for 74% of total inpatient discharges; Maternity and Newborn discharges represented 19% of total inpatient discharges; and Mental Health and Substance Abuse service discharges accounted for 7% of all inpatient discharges.*



*Data have been rounded

Trends in Inpatient Discharges by Service Categories (FY2009-2012) - Statewide

Substance abuse inpatient discharges increased by 8.7% from 2009 to 2012, while all other service category discharges decreased during this same period.

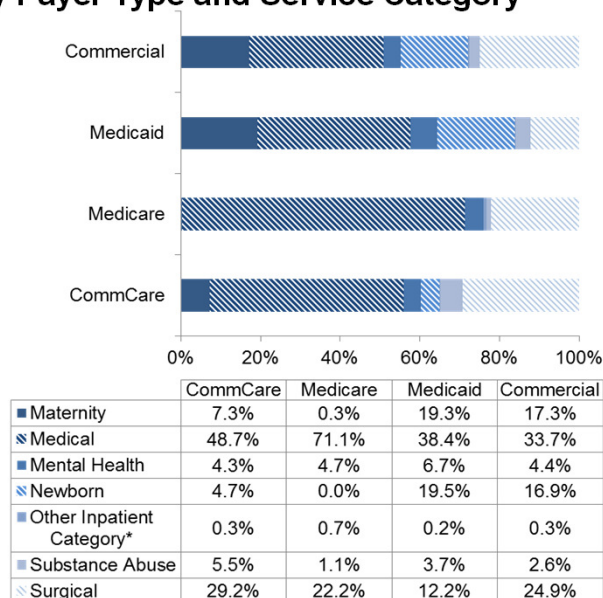
Inpatient Category	2009		2010		2011		2012		2011-2012	2009-2012
	#	ALOS*	#	ALOS	#	ALOS	#	ALOS	% Change	% Change
Maternity	78,425	3.1	76,154	3.2	76,721	3.2	75,470	3.2	-1.6%	-3.8%
Medical	411,867	4.2	416,990	4.1	420,737	4.1	403,095	4.1	-4.2%	-2.1%
Mental Health	40,142	9.2	41,307	9.2	40,115	9.4	39,918	9.4	-0.5%	-0.6%
Newborn	75,978	4.0	73,591	4.1	74,041	4.1	73,022	4.0	-1.4%	-3.9%
Other Inpatient Category**	4,435	14.0	4,116	14.0	3,449	14.8	3,845	13.3	11.5%	-13.3%
Substance Abuse	16,780	4.6	15,474	4.6	16,337	4.5	18,244	4.4	11.7%	8.7%
Surgical	178,434	5.2	176,934	5.1	174,002	5.1	168,060	5.0	-3.4%	-5.8%
Total	806,061	4.6	804,566	4.6	805,402	4.5	781,654	4.5	-2.9%	-3.0%

* ALOS = Average Length of Stay in days.

**Other Inpatient Category includes discharges that do not fall into one of the other major categories. Discharges in this category include procedures such as bone marrow transplants.

Inpatient Service Categories (FY2012) - Statewide

Percentage of Inpatient Discharges by Payer Type and Service Category



Inpatient Discharges and Average Length of Stay (ALOS) by Payer Type and Service Category

Inpatient Category	Commercial		Medicaid		Medicare		CommCare	
	#	ALOS	#	ALOS	#	ALOS	#	ALOS
Maternity	45,204	3.2	26,783	3.0	961	3.5	1,052	3.1
Medical	87,898	3.6	53,347	3.9	238,470	4.3	7,056	3.7
Mental Health	11,438	8.1	9,285	8.7	15,614	11.1	625	8.2
Newborn	44,036	3.8	27,081	4.4	24	3.5	676	4.5
Other Inpatient Category*	907	15.2	296	15.7	2,474	12.4	42	16.8
Substance Abuse	6,706	4.1	5,124	4.5	3,624	5.0	797	4.1
Surgical	64,987	4.0	16,868	5.6	74,378	5.7	4,234	4.5
Total	261,176	3.9	138,784	4.4	335,545	5.0	14,482	4.2

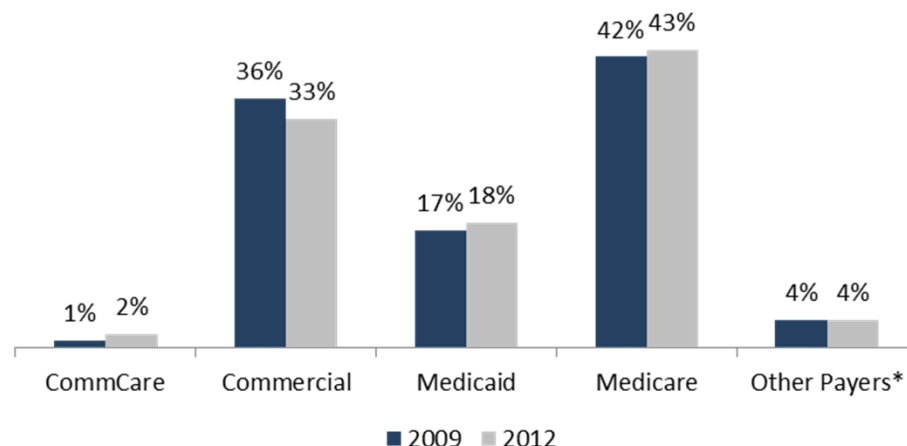
*Other Inpatient Category includes discharges that do not fall into one of the other major categories. Discharges in this category include procedures such as bone marrow transplants.

Notes: The payer type is derived using the primary payer information reported by the hospital at the time of patient discharge and may change upon payment by the insurer or payer. CommCare utilization may also include discharges for members covered by the CommCare Bridge program.

Inpatient Discharges by Payer Type - Statewide



Percentage of Inpatient Discharges by Payer Type, FY2009 vs FY2012



Please note: Trends in total discharges by payer type may be the result of changes in the number of members enrolled in each payer type category.

Trends in Inpatient Discharges by Payer Type (FY2009-2012)

	2009		2010		2011		2012		2011-2012 % Change	2009-2012 % Change
	#	ALOS	#	ALOS	#	ALOS	#	ALOS		
CommCare	11,318	4.2	14,079	4.1	14,359	4.1	14,482	4.2	0.9%	28.0%
Commercial	293,062	4.0	285,374	4.0	273,359	4.0	261,176	3.9	-4.5%	-10.9%
Medicaid	133,123	4.5	131,200	4.5	136,265	4.4	138,784	4.4	1.8%	4.3%
Medicare	337,751	5.2	343,650	5.1	349,873	5.1	335,545	5.0	-4.1%	-0.7%
Other Payers*	30,807	4.3	30,263	4.3	31,546	4.2	31,667	4.3	0.4%	2.8%
Total	806,061	4.6	804,566	4.6	805,402	4.5	781,654	4.5	-2.9%	-3.0%

*Other payers include automobile insurance, Health Safety Net, self-pay, workman's compensation and discharges missing payer information. Missing payer information accounted for less than 0.2% of observation stay discharges each year.

Notes: The payer type is derived using the primary payer information reported by the hospital at the time of patient discharge and may change upon payment by the insurer or payer. CommCare utilization may also include discharges for members covered by the CommCare Bridge program.

Top 10 MS-DRGs by Number of Inpatient Discharges (FY2012) - Statewide

MS-DRG	Title	Discharges	ALOS	Average Charges	% Total Discharges FY2012	% Total Discharges FY2009
795	Normal newborn	46,015	2.5	\$3,397	5.9%	6.2%
775	Vaginal delivery w/o complicating diagnoses	38,287	2.5	\$10,818	4.9%	5.0%
885*	Psychoses	29,322	9.9	\$19,160	3.8%	3.7%
470	Major joint replacement or reattachment of lower extremity w/o MCC	22,206	3.4	\$34,266	2.8%	2.3%
392	Esophagitis, gastroenteritis & misc. digest disorders w/o MCC	20,796	3.0	\$11,757	2.7%	2.4%
794	Neonate w other significant problems	16,103	2.9	\$4,991	2.1%	1.9%
766	Cesarean section w/o CC/MCC	13,559	4.0	\$14,856	1.7%	1.9%
603	Cellulitis w/o MCC	12,576	3.4	\$10,384	1.6%	1.4%
871	Septicemia or severe sepsis w/o MV 96+ hours w MCC	12,140	6.3	\$28,834	1.6%	1.0%
897	Alcohol/drug abuse or dependence w/o rehabilitation therapy w/o MCC	11,145	4.5	\$10,162	1.4%	1.2%

*MS-DRG 885 "Psychoses" includes the following ICD-9 diagnosis codes:

- 295 – Schizophrenic Disorders
- 296 – Episodic Mood Disorders
- 297 – Delusional Disorders
- 298 – Other Nonorganic Psychoses
- 299 – Pervasive Developmental Disorders

Top 10 MS-DRGs by Number of Inpatient Discharges for CommCare (FY2012) – Statewide

CommCare had lower percentages of inpatient discharges related to deliveries compared to Commercial and Medicaid payer types.* CommCare only provides coverage for adults, therefore reported utilization for newborns was likely attributed to a different insurer upon payment.

MS-DRG	Title	Discharges	ALOS	Average Charges	% of Discharges by Payer	Statewide % Comparison
392	Esophagitis, gastroent & misc digest disorders w/o MCC	576	2.9	\$11,360	4.0%	2.7%
897	Alcohol/drug abuse or dependence w/o rehabilitation therapy w/o MCC	547	4.1	\$9,187	3.8%	1.4%
775	Vaginal delivery w/o complicating diagnoses	521	2.5	\$9,157	3.6%	4.9%
885	Psychoses	496	8.7	\$15,215	3.4%	3.8%
795	Normal newborn	419	2.5	\$2,963	2.9%	5.9%
470	Major joint replacement or reattachment of lower extremity w/o MCC	357	3.3	\$35,444	2.5%	2.8%
603	Cellulitis w/o MCC	347	3.2	\$9,502	2.4%	1.6%
743	Uterine & adnexa proc for non-malignancy w/o CC/MCC	273	1.7	\$19,511	1.9%	0.6%
918	Poisoning & toxic effects of drugs w/o MCC	193	2.1	\$9,179	1.3%	0.6%
621	O.R. procedures for obesity w/o CC/MCC	188	2.0	\$27,087	1.3%	0.5%

*This finding is likely related to Massachusetts Medicaid (MassHealth) and CommCare eligibility rules. Women under 200% of the Federal Poverty Level (FPL) who are pregnant may be eligible for MassHealth, and thus ineligible for CommCare.

(<http://bluecrossmafoundation.org/sites/default/files/download/publication/MassHealth%20Eligibility.pdf>).

Notes: The payer type is derived using the primary payer information reported by the hospital at the time of patient discharge and may change upon payment by the insurer or payer.

Top 10 MS-DRGs by Number of Inpatient Discharges for Commercial Payer Types (FY2012) – Statewide

MS-DRG	Title	Discharges	ALOS	Average Charges	% of Discharges by Payer	Statewide % Comparison
795	Normal newborn	28,390	2.6	\$3,572	10.9%	5.9%
775	Vaginal delivery w/o complicating diagnoses	23,345	2.5	\$11,724	8.9%	4.9%
794	Neonate w other significant problems	9,615	3.0	\$5,265	3.7%	2.1%
766	Cesarean section w/o CC/MCC	8,905	4.1	\$15,765	3.4%	1.7%
470	Major joint replacement or reattachment of lower extremity w/o MCC	8,771	3.1	\$33,788	3.4%	2.8%
885	Psychoses	8,449	8.5	\$16,385	3.2%	3.8%
392	Esophagitis, gastroent & misc digest disorders w/o MCC	6,627	2.9	\$11,825	2.5%	2.7%
765	Cesarean section w CC/MCC	5,069	5.3	\$23,676	1.9%	1.1%
774	Vaginal delivery w complicating diagnoses	4,267	3.1	\$15,244	1.6%	0.9%
897	Alcohol/drug abuse or dependence w/o rehabilitation therapy w/o MCC	4,030	4.2	\$8,329	1.5%	1.4%

Notes: The payer type is derived using the primary payer information reported by the hospital at the time of patient discharge and may change upon payment by the insurer or payer.

Top 10 MS-DRGs by Number of Inpatient Discharges for Medicaid (FY2012) – Statewide

MS-DRG	Title	Discharges	ALOS	Average Charges	% of Discharges by Payer	Statewide % Comparison
795	Normal newborn	16,420	2.4	\$3,131	11.8%	5.9%
775	Vaginal delivery w/o complicating diagnoses	13,401	2.4	\$9,414	9.7%	4.9%
885	Psychoses	6,890	9.3	\$18,167	5.0%	3.8%
794	Neonate w other significant problems	6,088	2.9	\$4,613	4.4%	2.1%
766	Cesarean section w/o CC/MCC	4,132	3.9	\$13,081	3.0%	1.7%
392	Esophagitis, gastroent & misc digest disorders w/o MCC	3,435	2.9	\$11,549	2.5%	2.7%
897	Alcohol/drug abuse or dependence w/o rehabilitation therapy w/o MCC	3,093	4.5	\$10,247	2.2%	1.4%
765	Cesarean section w CC/MCC	2,749	5.0	\$18,958	2.0%	1.1%
603	Cellulitis w/o MCC	2,725	3.2	\$9,933	2.0%	1.6%
774	Vaginal delivery w complicating diagnoses	2,625	3.0	\$12,289	1.9%	0.9%

Notes: The payer type is derived using the primary payer information reported by the hospital at the time of patient discharge and may change upon payment by the insurer or payer.

Top 10 MS-DRGs by Number of Inpatient Discharges for Medicare (FY2012) – Statewide

MS-DRG	Title	Discharges	ALOS	Average Charges	% of Discharges by Payer	Statewide % Comparison
470**	Major joint replacement or reattachment of lower extremity w/o MCC	11,845	3.5	\$34,422	3.5%	2.8%
885***	Psychoses	11,264	11.6	\$22,395	3.4%	3.8%
392	Esophagitis, gastroent & misc digest disorders w/o MCC	9,185	3.1	\$11,909	2.7%	2.7%
871	Septicemia or severe sepsis w/o MV 96+ hours w MCC	9,136	6.3	\$27,463	2.7%	1.6%
292	Heart failure & shock w CC	7,214	4.5	\$15,325	2.1%	1.1%
690	Kidney & urinary tract infections w/o MCC	6,896	3.5	\$12,047	2.1%	1.3%
194	Simple pneumonia & pleurisy w CC	5,957	4.2	\$14,569	1.8%	1.2%
291	Heart failure & shock w MCC	5,799	5.9	\$20,730	1.7%	0.9%
312	Syncope & collapse	5,394	2.6	\$11,200	1.6%	0.9%
683	Renal failure w CC	5,301	4.1	\$13,958	1.6%	0.9%

MS-DRG 885 “Psychoses” Breakout by Age (Medicare Only FY2012)

Age	Discharges	% of Discharges
Under 65	8,400	74.6%
65 and older	2,864	25.4%
Total	11,264	100.0%

**MS-DRG 470 “Major joint replacement or reattachment of lower extremity without Major Complication or Co-Morbidity” includes but is not limited to the surgical repair of osteoarthritis and allied disorders, fractures of the patella, pelvis, tibia and fibula.

***MS-DRG 885 “Psychoses” includes the following diagnosis codes:

- 295 – Schizophrenic Disorders
- 296 – Episodic Mood Disorders
- 297 – Delusional Disorders
- 298 – Other Nonorganic Psychoses
- 299 – Pervasive Developmental Disorders

Notes: The payer type is derived using the primary payer information reported by the hospital at the time of patient discharge and may change upon payment by the insurer or payer.

Inpatient Delivery Discharges by Method of Delivery (FY2009-2012) - Statewide

	2009			2010			2011			2012		
	Discharges	% Total Birth	ALOS	Discharges	% Total Birth	ALOS	Discharges	% Total Birth	ALOS	Discharges	% Total Birth	ALOS
Cesarean Section	23,384	32.9%	4.5	22,813	33.2%	4.5	22,670	32.7%	4.5	21,784	31.9%	4.5
Vaginal Delivery	47,608	67.1%	2.5	45,899	66.8%	2.5	46,744	67.3%	2.5	46,537	68.1%	2.6
Total	70,992	100.0%	3.2	68,712	100.0%	3.2	69,414	100.0%	3.2	68,321	100.0%	3.2

***Delivery Methods Methodology:**

Vaginal Deliveries were determined by MS-DRGs 774, 775, 767 and 768

767 - Vaginal delivery w sterilization &/or D&C

768 - Vaginal delivery w O.R. proc except steril &/or D&C

774 - Vaginal delivery w complicating diagnoses

775 - Vaginal delivery w/o complicating diagnoses

Cesarean Section Deliveries were determined by MS-DRGs 765 and 766

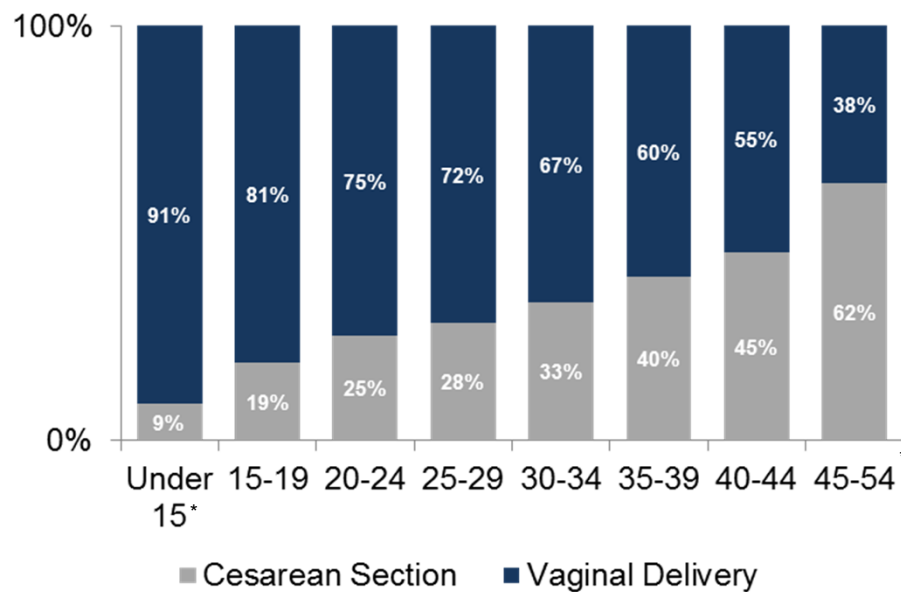
765 - Cesarean section w CC/MCC

766 - Cesarean section w/o CC/MCC

Method of Delivery by Demographic Summary (FY2012) - Statewide

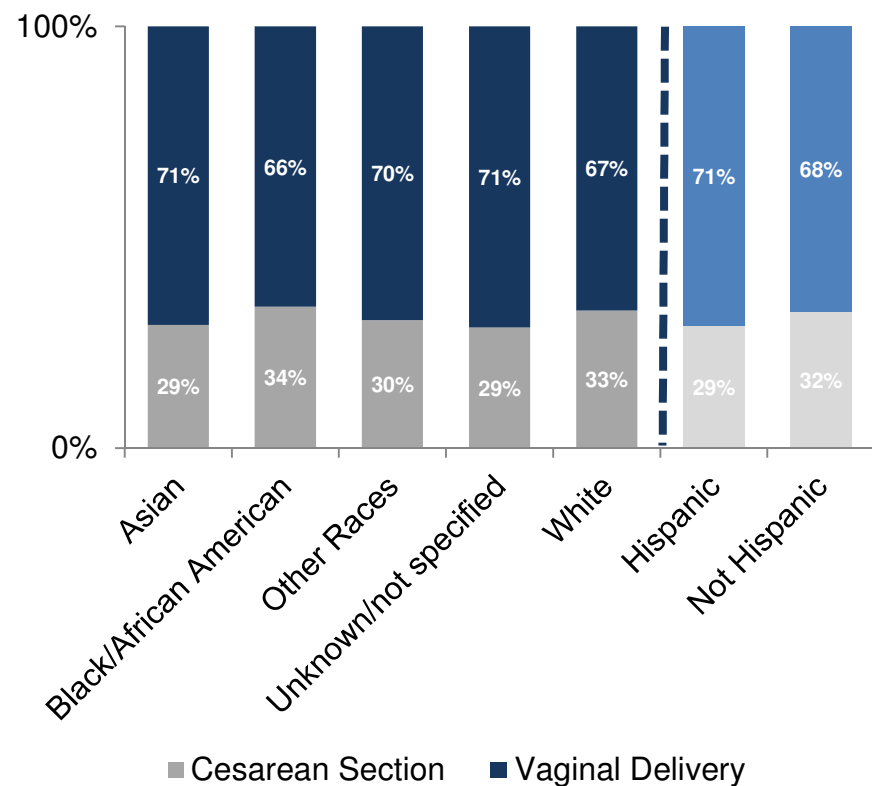


Percentage of Inpatient Delivery Discharges by Method of Delivery and Age

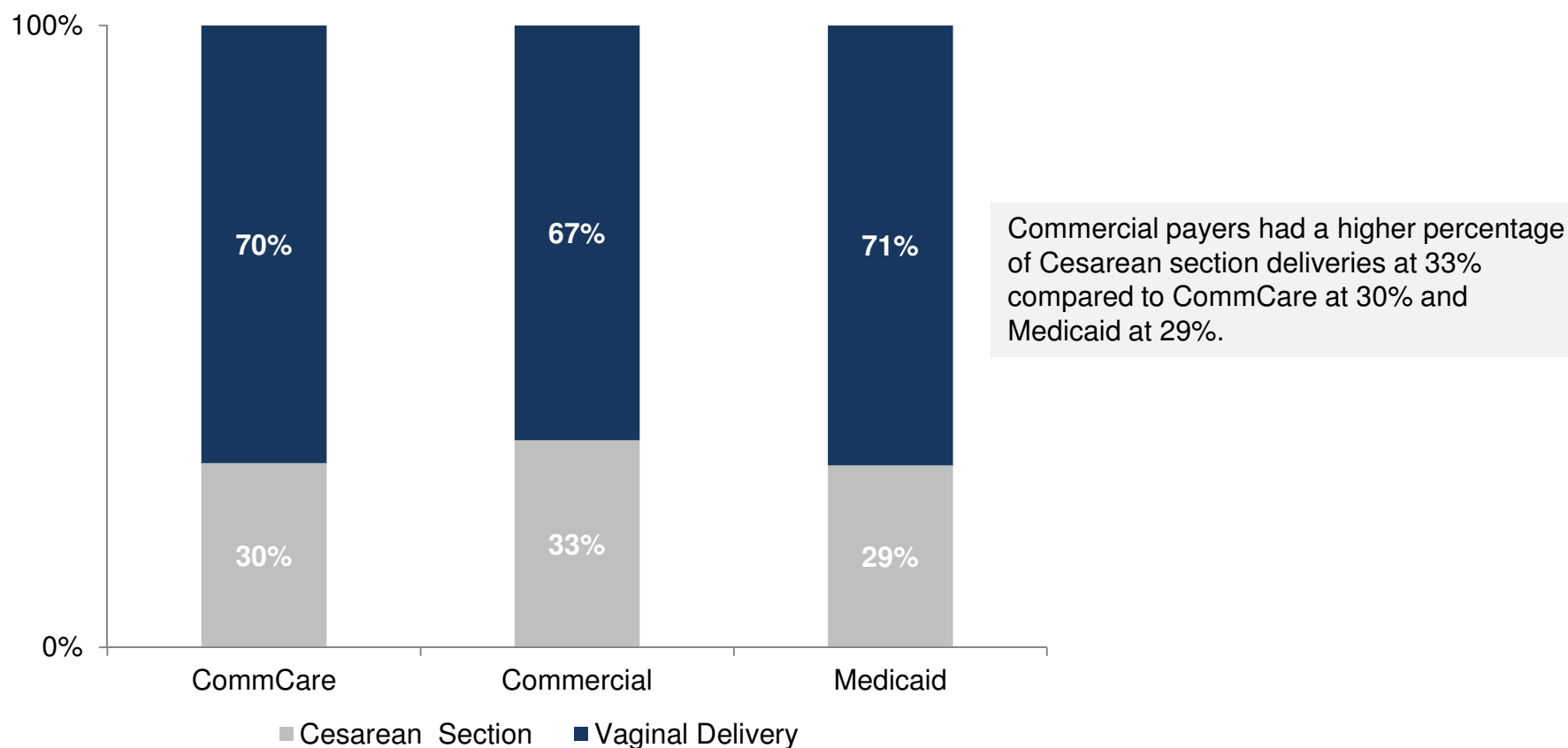


*For those under 15 years old, there were 34 deliveries; for those between 45-54 years old, there were 195 deliveries.

Percentage of Inpatient Delivery Discharges by Method of Delivery, Race and Hispanic or Latino Ethnicity



Method Of Delivery By Payer Type* - Statewide



*Medicare numbers were not included in this figure as it represented less than 1.1% of deliveries.

Notes: The payer type is derived using the primary payer information reported by the hospital at the time of patient discharge and may change upon payment by the insurer or payer.

Top 20 Hospital Sites by Number of Inpatient Delivery Discharges (FY2012)* - Statewide



Hospital Site	Cesarean Section			Vaginal Delivery			Total		
	#	% of Total Births	ALOS	#	% of Total Births	ALOS	#	ALOS	Ave. Age
Brigham and Women's Hospital	2,330	31.8%	5.1	4,992	68.2%	2.7	7,322	3.5	31.4
Beth Israel Deaconess Medical Center - East Campus	1,526	33.7%	5.0	3,006	66.3%	2.7	4,532	3.5	32.0
Newton-Wellesley Hospital	1,329	33.3%	4.4	2,659	66.7%	2.5	3,988	3.1	32.6
Baystate Medical Center	1,252	31.9%	4.3	2,672	68.1%	2.4	3,924	3.0	27.7
UMass Memorial Medical Center - Memorial Campus	1,053	27.7%	5.1	2,752	72.3%	2.7	3,805	3.4	29.2
Massachusetts General Hospital	1,057	29.9%	4.9	2,482	70.1%	2.7	3,539	3.4	31.7
South Shore Hospital	1,300	38.7%	4.6	2,060	61.3%	2.8	3,360	3.5	30.9
Boston Medical Center - Menino Pavilion Campus	752	30.9%	5.1	1,679	69.1%	3.0	2,431	3.6	28.6
Mount Auburn Hospital	493	21.5%	4.3	1,804	78.5%	2.5	2,297	2.9	32.2
Lowell General Hospital	707	32.7%	4.0	1,457	67.3%	2.5	2,164	3.0	28.4
Northeast Hospital - Beverly Campus	641	30.8%	4.2	1,440	69.2%	2.5	2,081	3.0	30.0
Winchester Hospital	625	35.2%	4.3	1,150	64.8%	2.5	1,775	3.1	31.3
Southcoast Hospitals Group - Charlton Memorial Campus	505	34.4%	3.8	963	65.6%	2.5	1,468	3.0	27.4
Saint Vincent Hospital	478	33.1%	4.1	966	66.9%	2.4	1,444	2.9	28.3
Southcoast Hospitals Group - St. Luke's Campus	520	37.0%	3.9	885	63.0%	2.5	1,405	3.0	27.0
Lawrence General Hospital	428	30.5%	3.6	975	69.5%	2.4	1,403	2.7	26.8
North Shore Medical Center - Salem Campus	420	31.0%	4.1	937	69.0%	2.3	1,357	2.9	28.9
Cambridge Health Alliance - Cambridge Hospital Campus	268	22.7%	3.9	915	77.3%	2.4	1,183	2.7	29.8
Mercy Medical Center - Springfield Campus	297	25.2%	3.7	883	74.8%	2.2	1,180	2.6	26.8
Tufts Medical Center	397	35.8%	6.5	712	64.2%	3.7	1,109	4.7	30.5
ALL OTHERS	5,406	32.7%	4.0	11,148	67.3%	2.4	16,554	2.9	29.0
Total	21,784	31.9%	4.5	46,537	68.1%	2.6	68,321	3.2	29.9

*Data are not age/ risk adjusted

STATEWIDE ANALYSIS

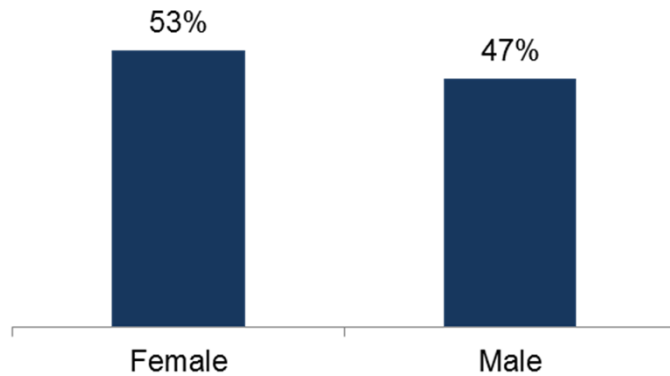
EMERGENCY DEPARTMENT DISCHARGES



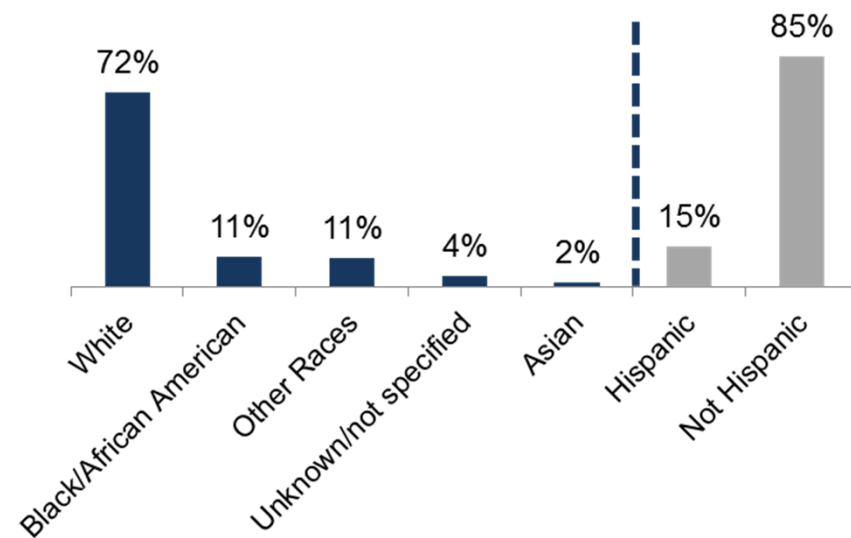
center
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and analysis

Emergency Department Discharges Demographic Summary (FY2012) - Statewide

Gender

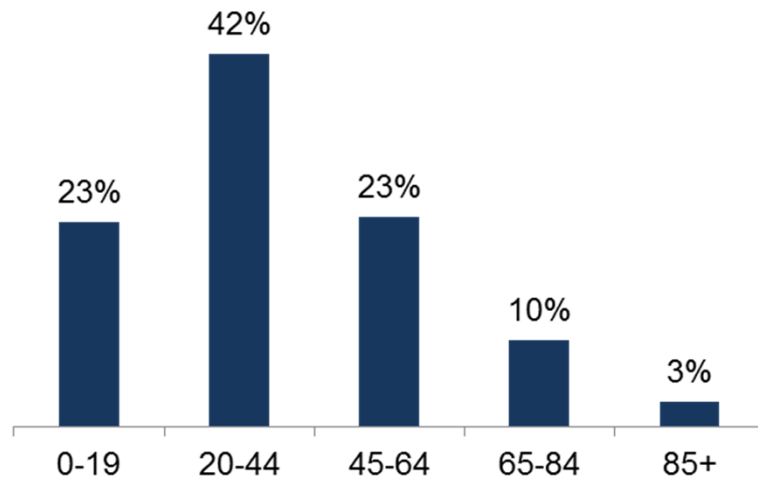


Race and Hispanic or Latino Ethnicity

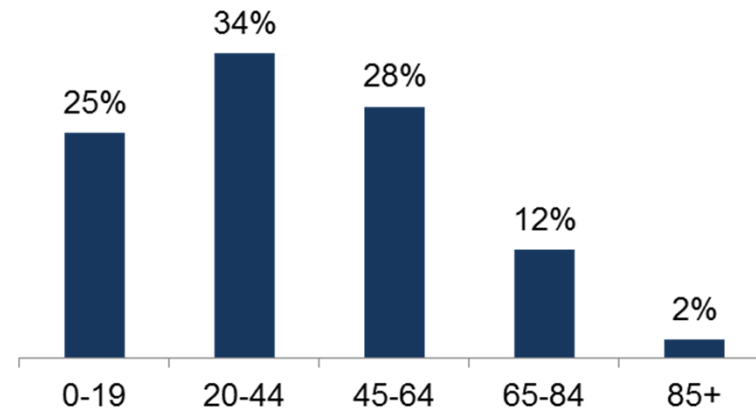


Emergency Department Discharges Demographic Summary - Statewide

**Percentage of Emergency Department
Discharges by Age (FY2012)**



Population Estimates by Age*

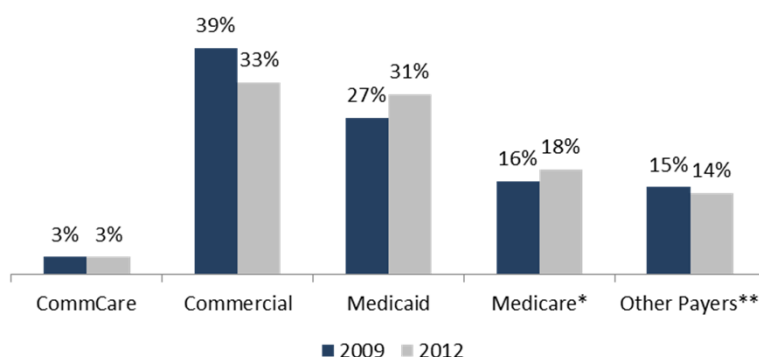


* American Community Survey 5-year Estimate (2008-2012) U.S. Department of Commerce United States Census Bureau <http://factfinder2.census.gov>
Estimates may not add up to 100% due to rounding.

Emergency Department Discharges by Payer Type - Statewide

Commercial payer emergency department discharges declined each year from 2009 to 2012, while Medicaid and Medicare increased over the same time period (13.4% and 13.7% respectively). Please note: Trends in total discharges by payer type may be the result of changes in the number of members enrolled in each payer type category.

Percentage of Emergency Department Discharges by Payer Type, FY2009 vs FY2012



Trends in Emergency Department Discharges by Payer Type (FY2009-2012)

	2009	2010	2011	2012	% Change 2011-2012	% Change 2009-2012
CommCare	64,087	78,319	84,776	84,043	-0.9%	31.1%
Commercial	949,063	883,740	853,267	810,030	-5.1%	-14.6%
Medicaid	661,552	684,837	686,225	750,341	9.3%	13.4%
Medicare*	382,854	400,315	415,428	435,379	4.8%	13.7%
Other Payers**	349,173	349,684	344,470	343,283	-0.3%	-1.7%
Total	2,406,729	2,396,895	2,384,166	2,423,076	1.6%	0.7%

*This finding may be the result of Medicare's high number of inpatient admissions from emergency departments. Emergency department discharges are excluded from the emergency department discharge Case-mix Discharge Database when the emergency department discharge results in an inpatient admission. See the CHIA's Case-mix Documentation at <http://www.mass.gov/chia/docs/r/hdd/ed-doc-manual-2012.pdf>

**Other payers include automobile insurance, Health Safety Net, self-pay, workman's compensation and discharges missing payer information. Missing payer information accounted for less than 0.2% of emergency department discharges each year.

Notes: The payer type is derived using the primary payer information reported by the hospital at the time of patient discharge and may change upon payment by the insurer or payer. CommCare utilization may also include discharges for members covered by the CommCare Bridge program.

Top 10 Principal Diagnoses by Number of Emergency Department Discharges (FY2012) - Statewide

ICD-9 Diagnosis Code	Title	Discharges	Average Charges	% of Total Discharges
789	Other symptoms involving abdomen and pelvis	121,638	\$2,951	5.0%
780*	General symptoms	108,075	\$1,909	4.5%
786	Symptoms involving respiratory system and other chest symptoms	105,932	\$2,213	4.4%
724	Other and unspecified disorders of back	72,892	\$1,227	3.0%
784	Symptoms involving head and neck	60,931	\$1,885	2.5%
959	Injury, other and unspecified	60,768	\$1,872	2.5%
682	Other cellulitis and abscess	57,659	\$1,175	2.4%
847	Sprains and strains of other and unspecified parts of back	54,020	\$1,274	2.2%
787	Symptoms involving digestive system	51,392	\$1,684	2.1%
873	Other open wound of head	47,580	\$1,565	2.0%

*Top 10 diagnoses codes under diagnosis code 780 "General Symptoms"

78060 Fever, unspecified
 7804 Dizziness and giddiness
 7802 Syncope and collapse
 78079 Other malaise and fatigue
 78039 Other convulsions
 78097 Altered mental status
 78099 Other general symptoms
 78031 Febrile convulsions (simple), unspecified
 78009 Other alteration of consciousness
 78052 Insomnia, unspecified

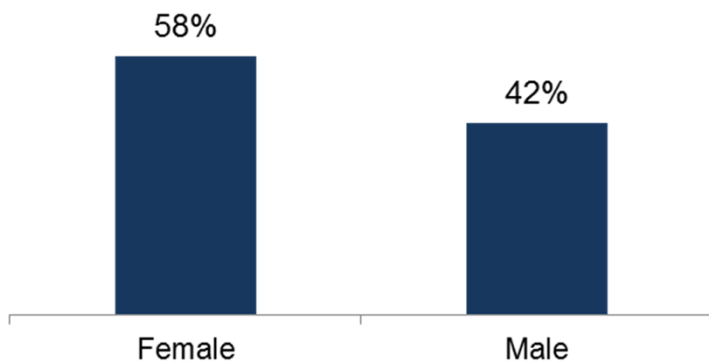
STATEWIDE ANALYSIS

OBSERVATION STAY DISCHARGES

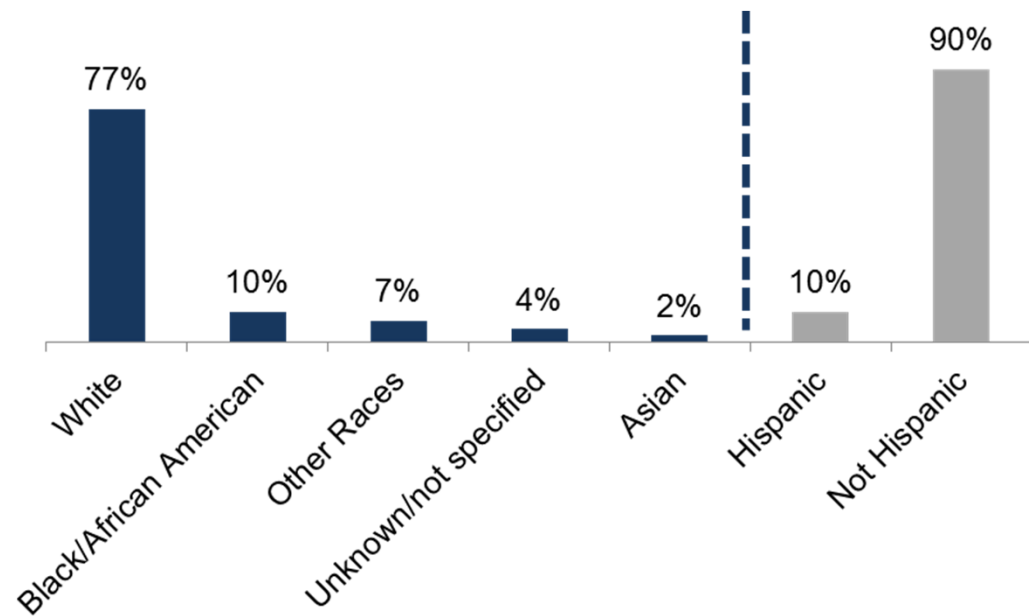


Observation Stay Discharges Demographic Summary (FY2012) - Statewide

Gender

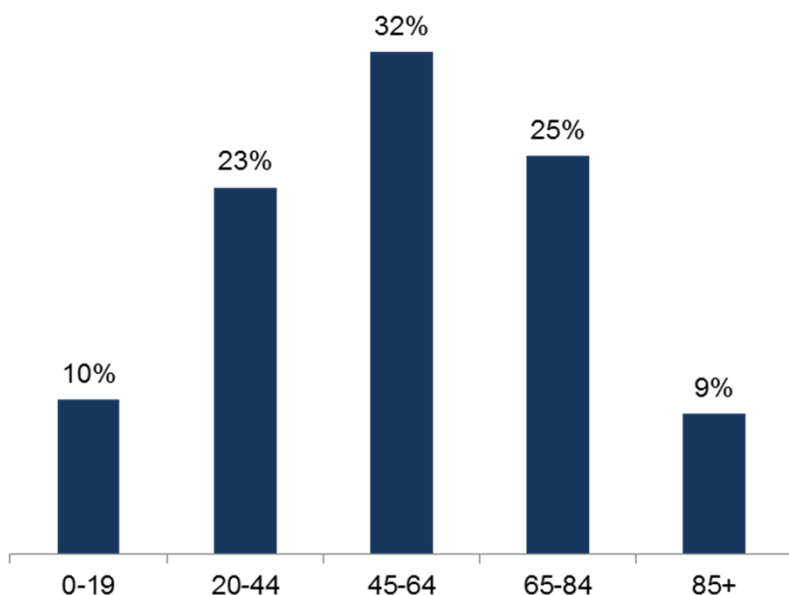


Race and Hispanic or Latino Ethnicity

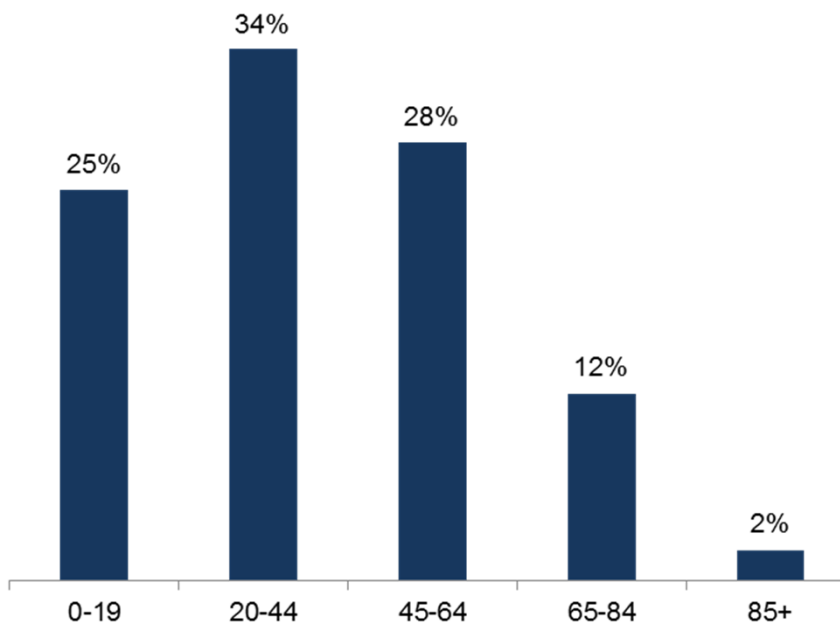


Observation Stay Discharges Demographic Summary - Statewide

Percentage of Observation Stay Discharges by Age (FY2012)



Population Estimates by Age*

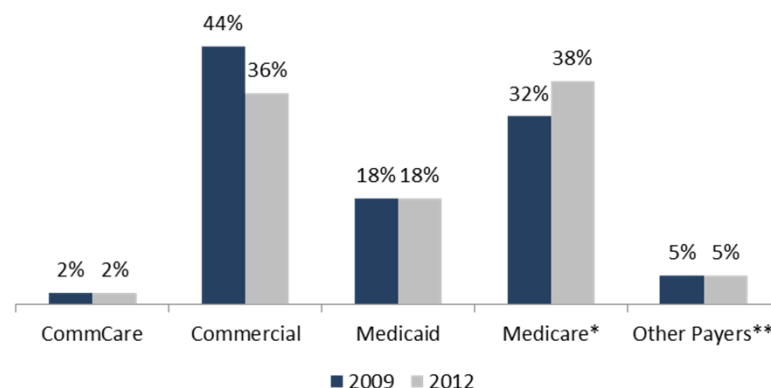


* American Community Survey 5-year Estimate (2008-2012) U.S. Department of Commerce United States Census Bureau <http://factfinder2.census.gov>
Estimates may not add up to 100% due to rounding.

Observation Stay Discharges by Payer Type - Statewide

Observation stay discharges with Medicare and Medicaid payer types had large percentage increases from 2009-2012, 42.7% and 25.4%, respectively. Please note: Trends in total discharges by payer type may be the result of changes in the number of members enrolled in each payer type category.

Percentage of Observation Stay Discharges by Payer Type, FY2009 vs FY2012



Trends in Observation Stay Discharges by Payer Type (FY2009-2012)

	2009	2010	2011	2012	% Change 2011-2012	% Change 2009-2012
CommCare	2,729	3,945	3,646	4,516	23.9%	65.5%
Commercial	65,802	66,915	63,799	65,753	3.1%	-0.1%
Medicaid	26,647	28,169	30,744	33,422	8.7%	25.4%
Medicare*	47,899	50,528	54,870	68,363	24.6%	42.7%
Other Payers**	7,127	7,592	7,996	8,668	8.4%	21.6%
Total	150,204	157,149	161,055	180,722	12.2%	20.3%

*In 2002, Medicare created a separate observation stay payment for three specific primary diagnoses: chest pain, congestive heart failure and asthma, provided the patient stayed a minimum of 8 hours. In 2008, Medicare allowed patients with any diagnosis to receive observation services. http://www.aarp.org/content/dam/aarp/research/public_policy_institute/health/2013/rapid-growth-in-medicare-hospital-observation-services-AARP-ppi-health.pdf. In 2010, ACA Section 3025 added a provision to establish the Medicare Hospital Readmissions Reduction Program (HRRP) to provide a financial incentive for hospitals to reduce preventable readmissions which may have affected inpatient and observation discharge trends.

**Other payers include automobile insurance, Health Safety Net, self-pay, workman's compensation and discharges missing payer information. Missing payer information accounted for less than 0.2% of observation stay discharges each year.

Notes: The payer type is derived using the primary payer information reported by the hospital at the time of patient discharge and may change upon payment by the insurer or payer. CommCare utilization may also include discharges for members covered by the CommCare Bridge program.

Top 10 Principal Diagnosis Codes by Number of Observation Stay Discharges (FY2012) - Statewide

ICD-9 Diagnosis Code	Title	Discharges	Average Charges	% of Total Discharges
786	Symptoms involving respiratory system and other chest symptoms	39,373	\$8,178	21.8%
780*	General symptoms	14,204	\$8,986	7.9%
789	Other symptoms involving abdomen and pelvis	5,616	\$9,621	3.1%
644	Early or threatened labor	4,367	\$1,868	2.4%
427	Cardiac dysrhythmias	4,078	\$19,241	2.3%
276	Disorders of fluid, electrolyte, and acid-base balance	3,866	\$7,379	2.1%
493	Asthma	2,379	\$6,703	1.3%
414	Other forms of chronic ischemic heart disease	2,363	\$25,429	1.3%
648	Other current conditions in the mother classifiable elsewhere, but complicating pregnancy, childbirth	2,296	\$3,456	1.3%
787	Symptoms involving digestive system	2,261	\$8,684	1.3%

*Top 10 principal diagnosis codes under diagnosis code 780 "General Symptoms"

7802 Syncope and collapse
 7804 Dizziness and giddiness
 78097 Altered mental status
 78079 Other malaise and fatigue
 78060 Fever, unspecified
 78039 Other convulsions
 78009 Other alteration of consciousness
 7801 Hallucinations
 78031 Febrile convulsions (simple), unspecified
 78093 Memory loss

ACUTE CARE HOSPITAL UTILIZATION TRENDS IN MASSACHUSETTS FY2009- 2012

MASSACHUSETTS RESIDENTS

CAPE & ISLANDS



Introduction

The Center for Health Information and Analysis (CHIA) is publishing these inpatient, emergency department, and observation stay utilization statistics of Massachusetts residents who have been discharged from Massachusetts acute care hospitals for the period beginning in Hospital Fiscal Year (FY) 2009 through 2012. In addition to a statewide report, 8 regional analyses were conducted based on combined Hospital Service Areas.

Each report includes demographic information for the region based on data from the American Community Survey. Differences in utilization may be driven by regional demographics such as age, race, ethnicity, and income.

These charts and tables can be used in conjunction with the associated data books. CHIA will monitor trends outlined in this report and update with additional years of data as it becomes available.

This analysis was produced using CHIA's Acute Hospital Case Mix Databases which are comprised of patient level discharge data submitted by Massachusetts acute hospitals prior to payment by a public payer or private insurer.

To learn more about the data and process used in the development of this report, please see the technical appendix.

REGIONAL REPORTING

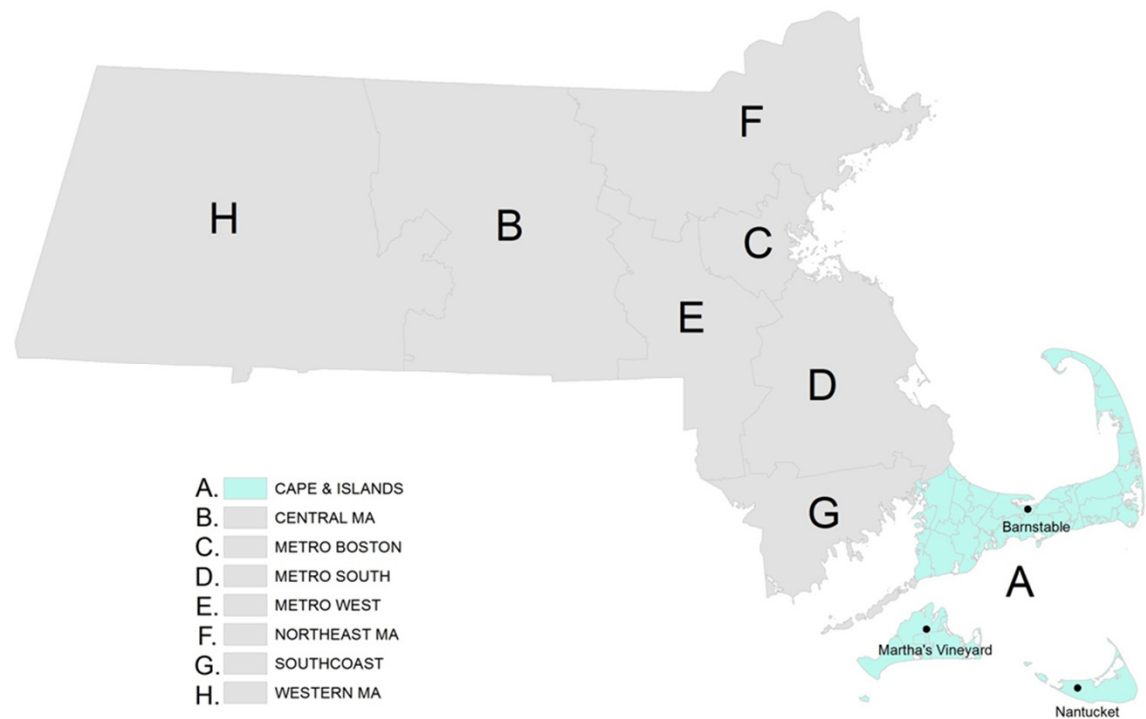
CAPE & ISLANDS



Cape & Islands

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 - [Acute Hospital Discharges by Payer Type](#)
 - [Discharges by Demographic Information](#)
 - [Inpatient Discharges by Inpatient Service Categories](#)
 - [Percentage of Inpatient Delivery Discharges by Method of Delivery](#)
 - [Top 10 MS-DRG by Number of Inpatient Discharges](#)
 - [Top 10 Principal Diagnosis Codes by Number of Emergency Department Discharges](#)
 - [Top 10 Principal Diagnosis Codes by Number of Observation Stay Discharges](#)



Key Findings for Cape & Islands*

Regional Demographics

- The Cape & Islands had the smallest regional population, representing only 3.7% of the state's population.
- The Cape & Islands had the highest regional percentage of individuals age 65 and older at 24.0%.
- The Cape & Islands had a higher percentage of individuals identified as White at 93.2% compared to 81.0% statewide. In the Cape & Islands, 2.4% of the population identified as Hispanic or Latino compared to 9.6% statewide.
- The mean household income of the Cape & Islands was lower than statewide (\$81,309 vs. \$89,965), but the proportion of the population below the poverty level was less than statewide (9.0% vs. 10.6%).

Acute Hospital Utilization

- There was a higher proportion of Medicare discharges across all discharge types compared to statewide, which reflected the higher proportion of individuals age 65 and older on the Cape & Islands.
- The Cape & Islands' observation stay discharges increased across all payer types from 2009 to 2012. Medicaid and Medicare observation stay discharges on the Cape & Islands had a higher percentage increase (94.9% and 93.5%, respectively) than statewide (25.4% and 42.7%, respectively). Please note: Trends in total discharges by payer type may be the result of changes in the number of members enrolled in each payer type category.

*All key findings are based on 2012 data unless otherwise indicated.

Notes: The payer type is derived using the primary payer information reported by the hospital at the time of patient discharge and may change upon payment by the insurer or payer.

Population at a Glance for Cape & Islands



Demographics*		Cape & Islands	Statewide
Total Population		243,825 (3.7% of the statewide population)	6,560,595
Gender			
	<i>Male</i>	47.9%	48.4%
	<i>Female</i>	52.1%	51.6%
Age			
	<i>0-19</i>	19.7%	24.7%
	<i>20-44</i>	24.1%	33.8%
	<i>45-64</i>	32.2%	27.7%
	<i>65-84</i>	20.9%	11.7%
	<i>85+</i>	3.1%	2.2%
Race			
	<i>White</i>	93.2%	81.0%
	<i>Black/African American</i>	2.4%	6.8%
	<i>Asian</i>	1.1%	5.4%
	<i>Other**</i>	1.5%	4.2%
	<i>Two or More Races</i>	1.8%	2.6%
Ethnicity			
	<i>Hispanic or Latino</i>	2.4%	9.6%
Income			
	<i>Mean Household Income</i>	\$81,309	\$89,965
	<i>Below Poverty Level</i>	9.0%	10.6%

*Source: American Community Survey 5-year Estimate (2008-2012) U.S. Department of Commerce United States Census Bureau <http://factfinder2.census.gov/>

**Includes Native and Pacific Islander and American Indian/Alaskan Native

Acute Hospital Utilization Trends (FY2009-2012) for Cape & Islands

Discharges

	Discharges				Regional % Change		Statewide % Change	
	2009	2010	2011	2012	2011-2012	2009-2012	2011-2012	2009-2012
Inpatient Discharges	33,547	32,059	32,515	31,949	-1.7%	-4.8%	-2.9%	-3.0%
Emergency Department Discharges	115,579	120,616	119,285	122,344	2.6%	5.9%	1.6%	0.7%
Observation Stay Discharges	3,103	3,682	3,840	4,849	26.3%	56.3%	12.2%	20.3%
Total	152,229	156,357	155,640	159,142	2.3%	4.5%	1.0%	0.7%

Regional Discharges as a Percentage of Statewide Discharges*

	2009	2010	2011	2012
% of Statewide Inpatient Discharges	4.2%	4.0%	4.0%	4.1%
% of Statewide Emergency Department Discharges	4.8%	5.0%	5.0%	5.0%
% of Statewide Observation Stay Discharges	2.1%	2.3%	2.4%	2.7%
% of Statewide Total Combined Discharges	4.5%	4.7%	4.6%	4.7%

*This region's population represents 3.7% of the statewide population.

Discharge Trends by Payer Type (FY2009-2012) for Cape & Islands

Inpatient Discharges

	Discharges				Regional % Change		Statewide % Change	
	2009	2010	2011	2012	2011-2012	2009-2012	2011-2012	2009-2012
CommCare	593	605	886	804	-9.3%	35.6%	0.9%	28.0%
Commercial	9,867	9,248	8,667	8,553	-1.3%	-13.3%	-4.5%	-10.9%
Medicaid	3,584	3,675	3,354	3,818	13.8%	6.5%	1.8%	4.3%
Medicare	17,969	17,391	18,082	17,325	-4.2%	-3.6%	-4.1%	-0.7%
Other Payers*	1,534	1,140	1,526	1,449	-5.0%	-5.5%	0.4%	2.8%
Total	33,547	32,059	32,515	31,949	-1.7%	-4.8%	-2.9%	-3.0%

Emergency Department Discharges

	Discharges				Regional % Change		Statewide % Change	
	2009	2010	2011	2012	2011-2012	2009-2012	2011-2012	2009-2012
CommCare	4,977	5,588	6,898	6,851	-0.7%	37.7%	-0.9%	31.1%
Commercial	42,658	39,181	37,940	37,952	0.0%	-11.0%	-5.1%	-14.6%
Medicaid	24,453	30,353	27,452	29,539	7.6%	20.8%	9.3%	13.4%
Medicare	24,295	26,249	28,656	29,876	4.3%	23.0%	4.8%	13.7%
Other Payers*	19,196	19,245	18,339	18,126	-1.2%	-5.6%	-0.3%	-1.7%
Total	115,579	120,616	119,285	122,344	2.6%	5.9%	1.6%	0.7%

Observation Stay Discharges

	Discharges				Regional % Change		Statewide % Change	
	2009	2010	2011	2012	2011-2012	2009-2012	2011-2012	2009-2012
CommCare	121	111	156	202	29.5%	66.9%	23.9%	65.5%
Commercial	1,364	1,535	1,455	1,599	9.9%	17.2%	3.1%	-0.1%
Medicaid	413	555	668	805	20.5%	94.9%	8.7%	25.4%
Medicare	1,043	1,292	1,376	2,018	46.7%	93.5%	24.6%	42.7%
Other Payers*	162	189	185	225	21.6%	38.9%	8.4%	21.6%
Total	3,103	3,682	3,840	4,849	26.3%	56.3%	12.2%	20.3%

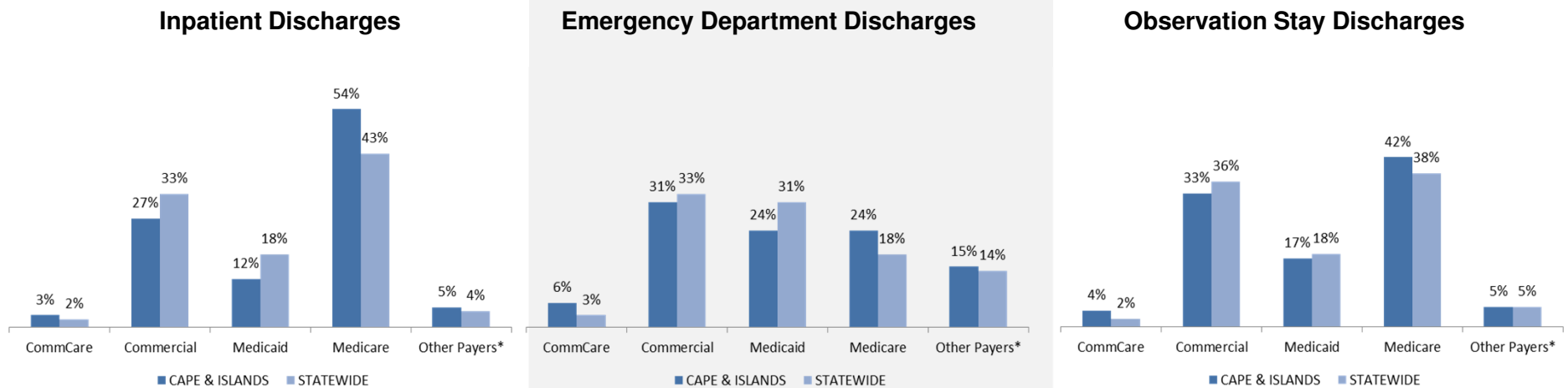
*Other payers include automobile insurance, Health Safety Net, self-pay, workman's compensation and discharges missing payer information.

Notes: The payer type is derived using the primary payer information reported by the hospital at the time of patient discharge and may change upon payment by the insurer or payer. CommCare utilization may also include discharges for members covered by the CommCare Bridge program.

Please note:
Trends in total discharges by payer type may be the result of changes in the number of members enrolled in each payer type category.

Percentage of Discharges by Payer Type (FY2012) for Cape & Islands

The payer type is derived using the primary payer information reported by the hospital at the time of patient discharge and may change upon payment by the insurer or payer. Trends in total discharges by payer type may be the result of changes in the number of members enrolled in each payer type category. CommCare utilization may also include discharges for members covered by the CommCare Bridge program.



*Other payers include automobile insurance, Health Safety Net, self-pay, workman's compensation and discharges missing payer information.

Discharges by Demographic Information (Cape & Islands vs. Statewide FY2012)

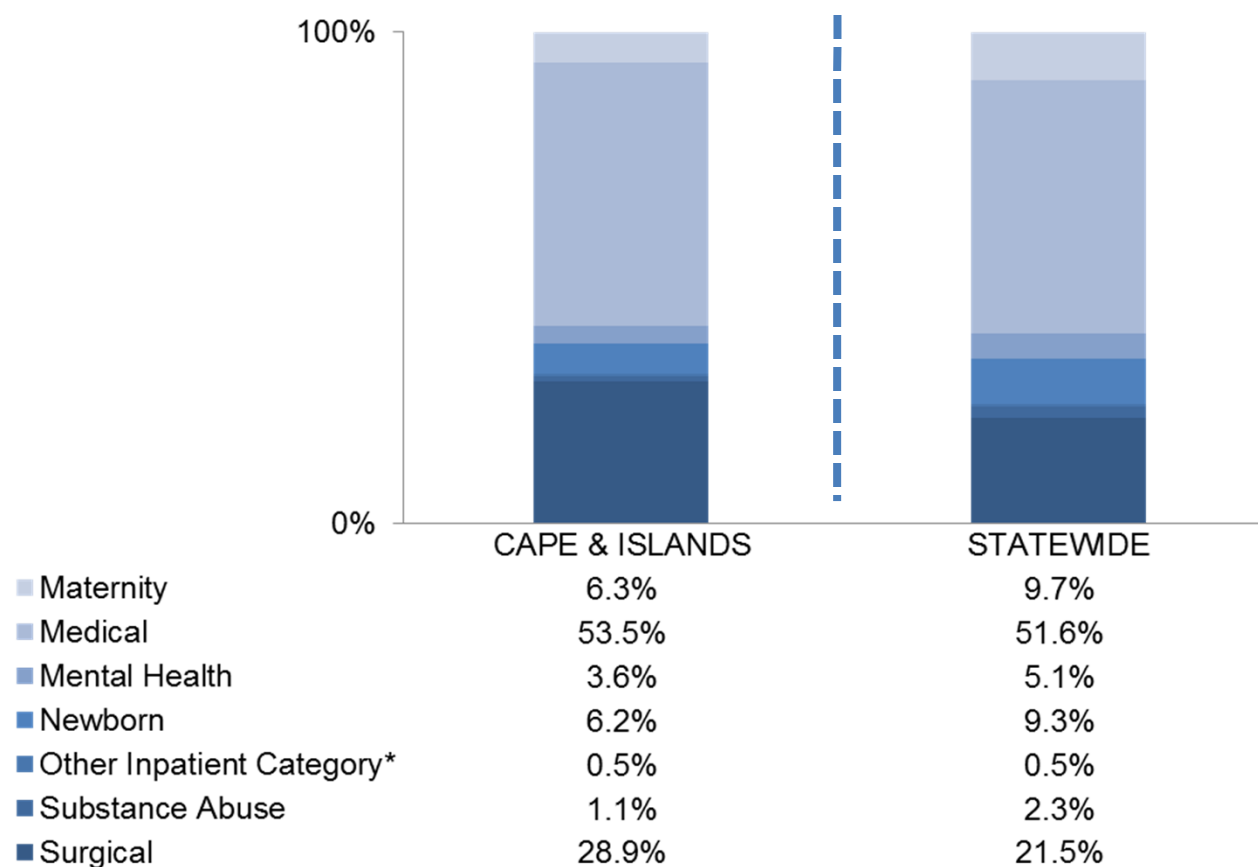
Age

	Inpatient Discharges			Emergency Department Discharges			Observation Stay Discharges		
	Regional		Statewide Comparison	Regional		Statewide Comparison	Regional		Statewide Comparison
Age (years)	#	%	%	#	%	%	#	%	%
0-19	3,070	9.6%	14.6%	21,123	17.3%	22.8%	465	9.6%	9.9%
20-44	4,854	15.2%	22.6%	44,518	36.4%	41.6%	998	20.6%	23.4%
45-64	7,576	23.7%	25.0%	32,306	26.4%	23.4%	1,380	28.5%	32.1%
65-84	11,839	37.1%	27.3%	18,699	15.3%	9.6%	1,461	30.1%	25.5%
85+	4,610	14.4%	10.4%	5,698	4.7%	2.8%	545	11.2%	9.0%

Race and Hispanic or Latino Ethnicity

	Inpatient Discharges			Emergency Department Discharges			Observation Stay Discharges		
	Regional		Statewide Comparison	Regional		Statewide Comparison	Regional		Statewide Comparison
Race	#	%	%	#	%	%	#	%	%
Asian	117	0.4%	2.8%	505	0.4%	2.0%	21	0.4%	2.0%
Black/ African American	977	3.1%	7.6%	6,613	5.4%	11.4%	189	3.9%	9.8%
Other Races	949	3.0%	5.9%	6,296	5.1%	10.8%	195	4.0%	6.9%
Unknown / not specified	752	2.4%	4.9%	2,096	1.7%	4.0%	139	2.9%	4.1%
White	29,154	91.3%	78.9%	106,834	87.3%	71.9%	4,305	88.8%	77.1%
Ethnicity									
Hispanic or Latino	463	1.4%	8.2%	3,845	3.1%	15.0%	124	2.6%	9.7%

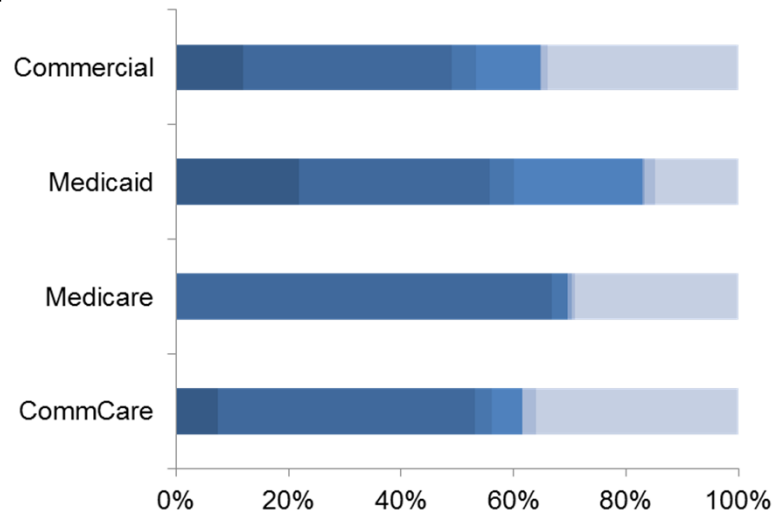
Inpatient Discharges by Inpatient Service Categories (Cape & Islands vs. Statewide FY2012)



*Other Inpatient Category includes discharges that do not fall into one of the other major categories. Discharges in this category include procedures such as bone marrow transplants.

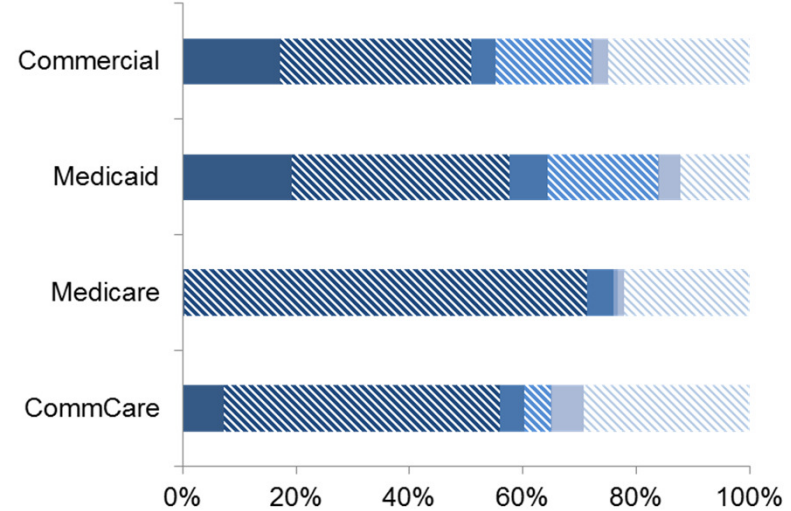
Percentage of Inpatient Discharges by Payer Type and Service Category (Cape & Islands vs. Statewide FY2012)

Cape & Islands



	CommCare	Medicare	Medicaid	Commercial
■ Maternity	7.5%	0.1%	21.8%	11.8%
■ Medical	45.6%	66.6%	33.9%	37.2%
■ Mental Health	3.1%	2.9%	4.3%	4.2%
■ Newborn	5.3%	0.0%	22.9%	11.4%
■ Other Inpatient Category*	0.0%	0.6%	0.3%	0.3%
■ Substance Abuse	2.4%	0.7%	2.0%	1.0%
■ Surgical	36.1%	29.0%	14.8%	34.0%

Statewide

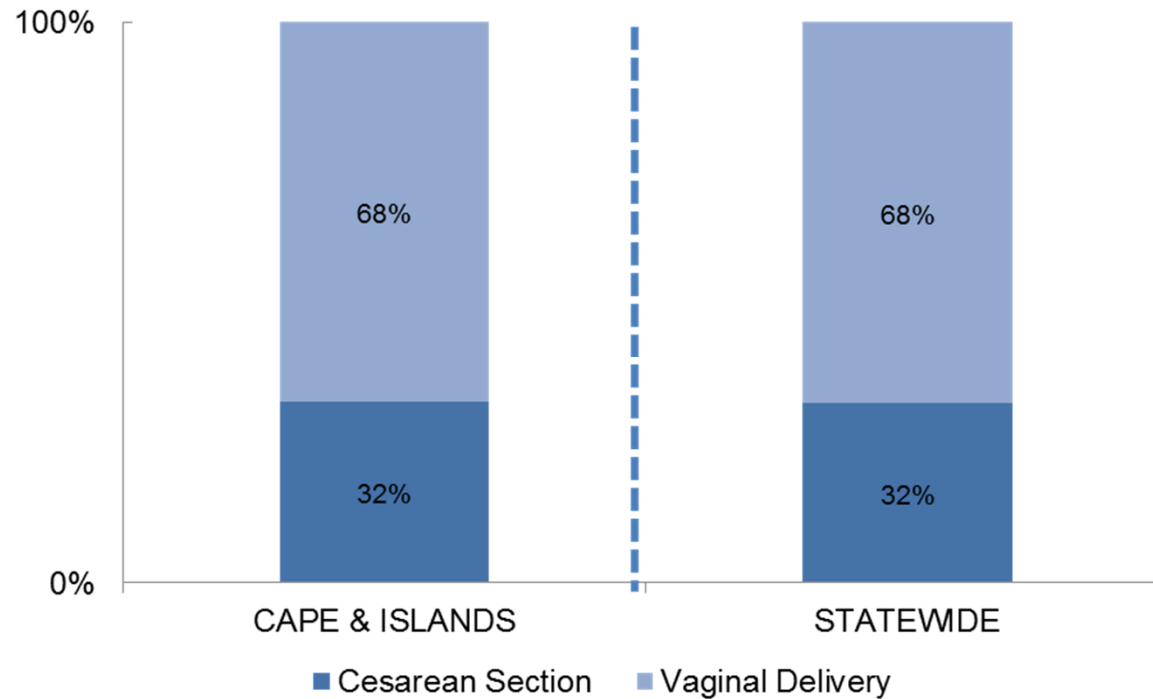


	CommCare	Medicare	Medicaid	Commercial
■ Maternity	7.3%	0.3%	19.3%	17.3%
■ Medical	48.7%	71.1%	38.4%	33.7%
■ Mental Health	4.3%	4.7%	6.7%	4.4%
■ Newborn	4.7%	0.0%	19.5%	16.9%
■ Other Inpatient Category*	0.3%	0.7%	0.2%	0.3%
■ Substance Abuse	5.5%	1.1%	3.7%	2.6%
■ Surgical	29.2%	22.2%	12.2%	24.9%

*Other Inpatient Category includes discharges that do not fall into one of the other major categories. Discharges in this category include procedures such as bone marrow transplants.

Notes: The payer type is derived using the primary payer information reported by the hospital at the time of patient discharge and may change upon payment by the insurer or payer. Trends in total discharges by payer type may be the result of changes in the number of members enrolled in each payer type category. CommCare utilization may also include discharges for members covered by the CommCare Bridge program.

Percentage of Inpatient Delivery Discharges by Method of Delivery (Cape & Islands vs. Statewide FY2012)



Top 10 MS-DRGs by Number of Inpatient Discharges (FY2012) for Cape & Islands

MS-DRG	Title	Discharges	Average Charges	ALOS	% of Regional Discharges	Statewide % Comparison
470	Major joint replacement or reattachment of lower extremity w/o MCC	1,505	\$33,659	3.3	4.7%	2.8%
795	Normal newborn	1,368	\$2,494	2.5	4.3%	5.9%
775	Vaginal delivery w/o complicating diagnoses	1,041	\$5,822	2.3	3.3%	4.9%
871	Septicemia or severe sepsis w/o MV 96+ hours w MCC	881	\$20,491	5.6	2.8%	1.6%
885	Psychoses	881	\$11,982	8.8	2.8%	3.8%
392	Esophagitis, gastroent & misc digest disorders w/o MCC	692	\$12,092	3.3	2.2%	2.7%
766	Cesarean section w/o CC/MCC	415	\$9,728	3.8	1.3%	1.7%
378	G.I. hemorrhage w CC	415	\$16,540	3.4	1.3%	0.8%
292	Heart failure & shock w CC	391	\$12,192	4.1	1.2%	1.1%
603	Cellulitis w/o MCC	381	\$9,666	3.5	1.2%	1.6%

Top 10 Principal Diagnosis Codes by Number of Emergency Department Discharges (FY2012) for Cape & Islands

ICD-9 Diagnosis Code	Title	Discharges	Average Charges	% of Regional Discharges	Statewide % Comparison
789	Other symptoms involving abdomen and pelvis	7,230	\$3,418	5.9%	5.0%
786	Symptoms involving respiratory system and other chest symptoms	6,470	\$2,269	5.3%	4.4%
780	General symptoms	5,677	\$2,200	4.6%	4.5%
724	Other and unspecified disorders of back	3,948	\$1,381	3.2%	3.0%
959	Injury, other and unspecified	3,767	\$1,790	3.1%	2.5%
682	Other cellulitis and abscess	3,540	\$1,209	2.9%	2.4%
784	Symptoms involving head and neck	2,880	\$2,029	2.4%	2.5%
847	Sprains and strains of other and unspecified parts of back	2,460	\$1,484	2.0%	2.2%
719	Other and unspecified disorders of joint	2,392	\$1,196	2.0%	1.7%
599	Other disorders of urethra and urinary tract	2,121	\$1,584	1.7%	1.6%

Top 10 Principal Diagnosis Codes by Number of Observation Stay Discharges (FY2012) for Cape & Islands

ICD-9 Diagnosis Code	Title	Discharges	Average Charges	% of Regional Discharges	Statewide % Comparison
786	Symptoms involving respiratory system and other chest symptoms	481	\$9,620	9.9%	21.8%
780	General symptoms	253	\$11,166	5.2%	7.9%
427	Cardiac dysrhythmias	207	\$31,767	4.3%	2.3%
414	Other forms of chronic ischemic heart disease	147	\$28,220	3.0%	1.3%
276	Disorders of fluid, electrolyte, and acid-base balance	136	\$10,603	2.8%	2.1%
789	Other symptoms involving abdomen and pelvis	105	\$12,783	2.2%	3.1%
644	Early or threatened labor	98	\$2,880	2.0%	2.4%
440	Atherosclerosis	86	\$31,592	1.8%	0.4%
574	Cholelithiasis	82	\$16,652	1.7%	0.7%
724	Other and unspecified disorders of back	79	\$15,222	1.6%	1.1%

ACUTE CARE HOSPITAL UTILIZATION TRENDS IN MASSACHUSETTS FY2009- 2012

MASSACHUSETTS RESIDENTS

CENTRAL MA



Introduction

The Center for Health Information and Analysis (CHIA) is publishing these inpatient, emergency department, and observation stay utilization statistics of Massachusetts residents who have been discharged from Massachusetts acute care hospitals for the period beginning in Hospital Fiscal Year (FY) 2009 through 2012. In addition to a statewide report, 8 regional analyses were conducted based on combined Hospital Service Areas.

Each report includes demographic information for the region based on data from the American Community Survey. Differences in utilization may be driven by regional demographics such as age, race, ethnicity, and income.

These charts and tables can be used in conjunction with the associated data books. CHIA will monitor trends outlined in this report and update with additional years of data as it becomes available.

This analysis was produced using CHIA's Acute Hospital Case Mix Databases which are comprised of patient level discharge data submitted by Massachusetts acute hospitals prior to payment by a public payer or private insurer.

To learn more about the data and process used in the development of this report, please see the technical appendix.

REGIONAL REPORTING

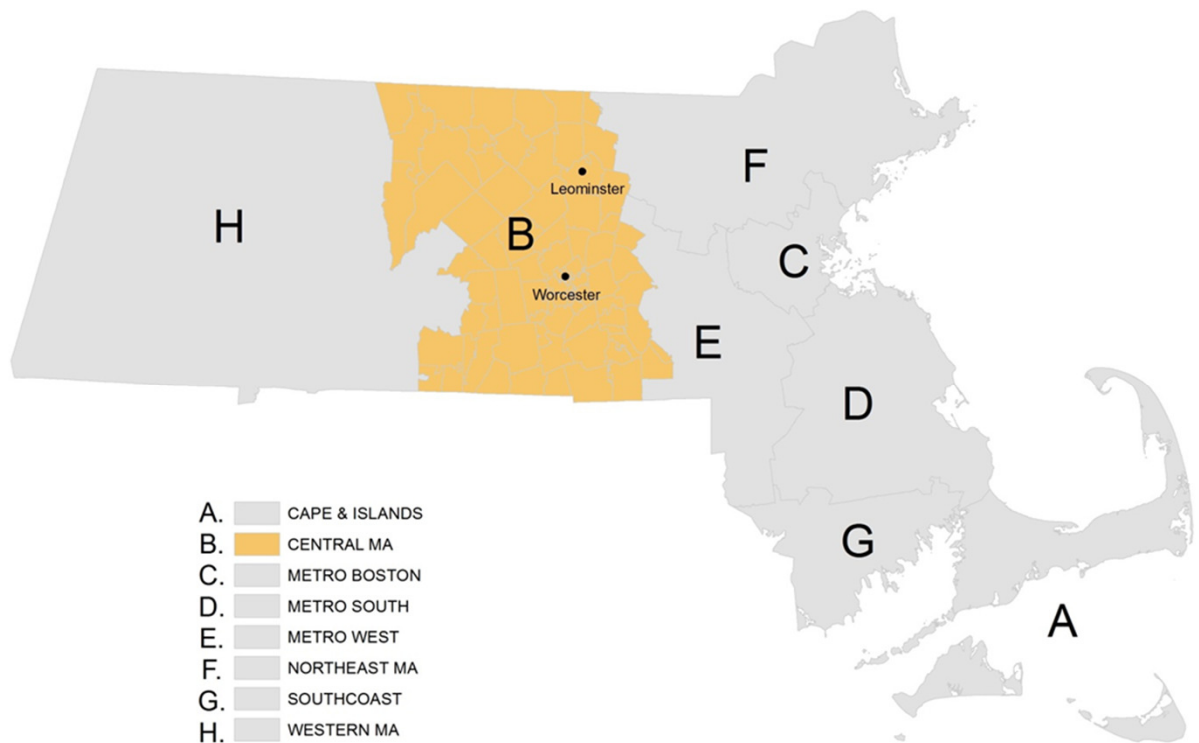
CENTRAL MA



Central MA

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- [Population at a Glance](#)
- [Acute Hospital Utilization Trends](#)
 - [Acute Hospital Discharges by Payer Type](#)
 - [Discharges by Demographic Information](#)
 - [Inpatient Discharges by Inpatient Service Categories](#)
 - [Percentage of Inpatient Delivery Discharges by Method of Delivery](#)
 - [Top 10 MS-DRG by Number of Inpatient Discharges](#)
 - [Top 10 Principal Diagnosis Codes by Number of Emergency Department Discharges](#)
 - [Top 10 Principal Diagnosis Codes by Number of Observation Stay Discharges](#)



Key Findings for Central MA*

Regional Demographics

- Central MA had a higher proportion of individuals identified as White at 86.7% compared to 81.0% statewide. In Central MA, the proportion of individuals identified as Hispanic or Latino was identical to statewide (9.6%).
- The Central MA mean household income was lower compared to the statewide average (\$79,956 vs. \$89,965).

Acute Hospital Utilization

- Contrary to the statewide trend, observation stay discharges decreased by 1.0% in Central MA, compared to a 20.3% increase in observation stay discharges statewide from 2009 to 2012.
- Central MA had the lowest percentage of Cesarean section delivery discharges at 28.7% compared to the statewide percentage of 31.9%.

*All key findings are based on 2012 data unless otherwise indicated.

Notes: The payer type is derived using the primary payer information reported by the hospital at the time of patient discharge and may change upon payment by the insurer or payer.

Population at a Glance for Central MA

Demographics*		Central MA	Statewide
Total Population		748,734 (11.4% of the statewide population)	6,560,595
Gender			
	<i>Male</i>	49.2%	48.4%
	<i>Female</i>	50.8%	51.6%
Age			
	<i>0-19</i>	26.3%	24.7%
	<i>20-44</i>	32.6%	33.8%
	<i>45-64</i>	28.1%	27.7%
	<i>65-84</i>	10.7%	11.7%
	<i>85+</i>	2.2%	2.2%
Race			
	<i>White</i>	86.7%	81.0%
	<i>Black/African American</i>	4.2%	6.8%
	<i>Asian</i>	4.0%	5.4%
	<i>Other*</i>	2.9%	4.2%
	<i>Two or More Races</i>	2.3%	2.6%
Ethnicity			
	<i>Hispanic or Latino</i>	9.6%	9.6%
Income			
	<i>Mean Household Income</i>	\$79,956	\$89,965
	<i>Below Poverty Level</i>	10.2%	10.6%

*Source: American Community Survey 5-year Estimate (2008-2012) U.S. Department of Commerce United States Census Bureau <http://factfinder2.census.gov>

**Includes Native and Pacific Islander and American Indian/Alaskan Native

Acute Hospital Utilization Trends (FY2009-2012) for Central MA

Discharges

	Discharges				Regional % Change		Statewide % Change	
	2009	2010	2011	2012	2011-2012	2009-2012	2011-2012	2009-2012
Inpatient Discharges	85,864	83,913	86,808	83,461	-3.9%	-2.8%	-2.9%	-3.0%
Emergency Department Discharges	263,714	263,209	263,679	269,184	2.1%	2.1%	1.6%	0.7%
Observation Stay Discharges	24,877	25,280	24,970	24,626	-1.4%	-1.0%	12.2%	20.3%
Total	374,455	372,402	375,457	377,271	0.5%	0.8%	1.0%	0.7%

Regional Discharges as a Percentage of Statewide Discharges*

	2009	2010	2011	2012
% of Statewide Inpatient Discharges	10.7%	10.4%	10.8%	10.7%
% of Statewide Emergency Department Discharges	11.0%	11.0%	11.1%	11.1%
% of Statewide Observation Stay Discharges	16.6%	16.1%	15.5%	13.6%
% of Statewide Total Combined Discharges	11.1%	11.1%	11.2%	11.1%

*This region's population represents 11.4% of the statewide population.

Discharge Trends by Payer Type (FY2009-2012) for Central MA

Inpatient Discharges

	Discharges				Regional % Change		Statewide % Change	
	2009	2010	2011	2012	2011-2012	2009-2012	2011-2012	2009-2012
CommCare	1,218	1,325	1,381	1,462	5.9%	20.0%	0.9%	28.0%
Commercial	32,403	28,944	29,212	27,614	-5.5%	-14.8%	-4.5%	-10.9%
Medicaid	14,545	14,732	15,898	16,055	1.0%	10.4%	1.8%	4.3%
Medicare	34,272	35,578	36,921	35,046	-5.1%	2.3%	-4.1%	-0.7%
Other Payers*	3,426	3,334	3,396	3,284	-3.3%	-4.1%	0.4%	2.8%
Total	85,864	83,913	86,808	83,461	-3.9%	-2.8%	-2.9%	-3.0%

Emergency Department Discharges

	Discharges				Regional % Change		Statewide % Change	
	2009	2010	2011	2012	2011-2012	2009-2012	2011-2012	2009-2012
CommCare	6,188	6,620	7,287	7,659	5.1%	23.8%	-0.9%	31.1%
Commercial	108,064	99,376	93,977	89,844	-4.4%	-16.9%	-5.1%	-14.6%
Medicaid	74,055	79,869	82,967	90,222	8.7%	21.8%	9.3%	13.4%
Medicare	37,276	39,287	41,990	44,100	5.0%	18.3%	4.8%	13.7%
Other Payers*	38,131	38,057	37,458	37,359	-0.3%	-2.0%	-0.3%	-1.7%
Total	263,714	263,209	263,679	269,184	2.1%	2.1%	1.6%	0.7%

Observation Stay Discharges

	Discharges				Regional % Change		Statewide % Change	
	2009	2010	2011	2012	2011-2012	2009-2012	2011-2012	2009-2012
CommCare	434	509	527	584	10.8%	34.6%	23.9%	65.5%
Commercial	10,929	10,858	10,091	8,573	-15.0%	-21.6%	3.1%	-0.1%
Medicaid	4,932	5,182	5,536	4,671	-15.6%	-5.3%	8.7%	25.4%
Medicare	7,637	7,595	7,536	9,597	27.3%	25.7%	24.6%	42.7%
Other Payers*	945	1,136	1,280	1,201	-6.2%	27.1%	8.4%	21.6%
Total	24,877	25,280	24,970	24,626	-1.4%	-1.0%	12.2%	20.3%

*Other payers include automobile insurance, Health Safety Net, self-pay, workman's compensation and discharges missing payer information.

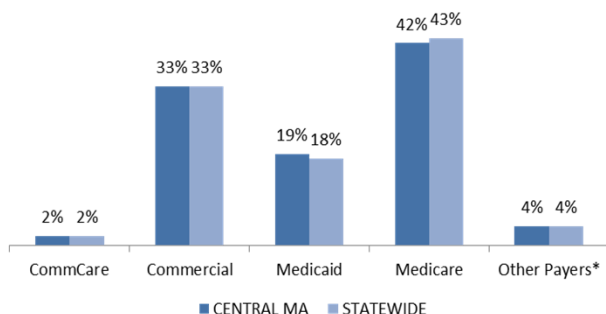
Notes: The payer type is derived using the primary payer information reported by the hospital at the time of patient discharge and may change upon payment by the insurer or payer. CommCare utilization may also include discharges for members covered by the CommCare Bridge program.

Please note:
Trends in total discharges by payer type may be the result of changes in the number of members enrolled in each payer type category.

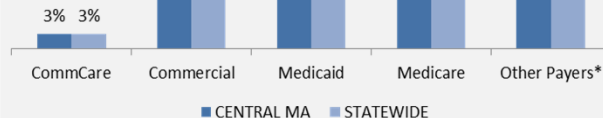
Percentage of Discharges by Payer Type (FY2012) for Central MA

The payer type is derived using the primary payer information reported by the hospital at the time of patient discharge and may change upon payment by the insurer or payer. Trends in total discharges by payer type may be the result of changes in the number of members enrolled in each payer type category. CommCare utilization may also include discharges for members covered by the CommCare Bridge program.

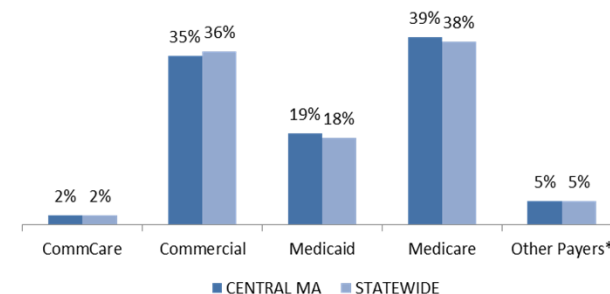
Inpatient Discharges



Emergency Department Discharges



Observation Stay Discharges



*Other payers include automobile insurance, Health Safety Net, self-pay, workman's compensation and discharges missing payer information.

Discharges by Demographic Information (Central MA vs. Statewide FY2012)

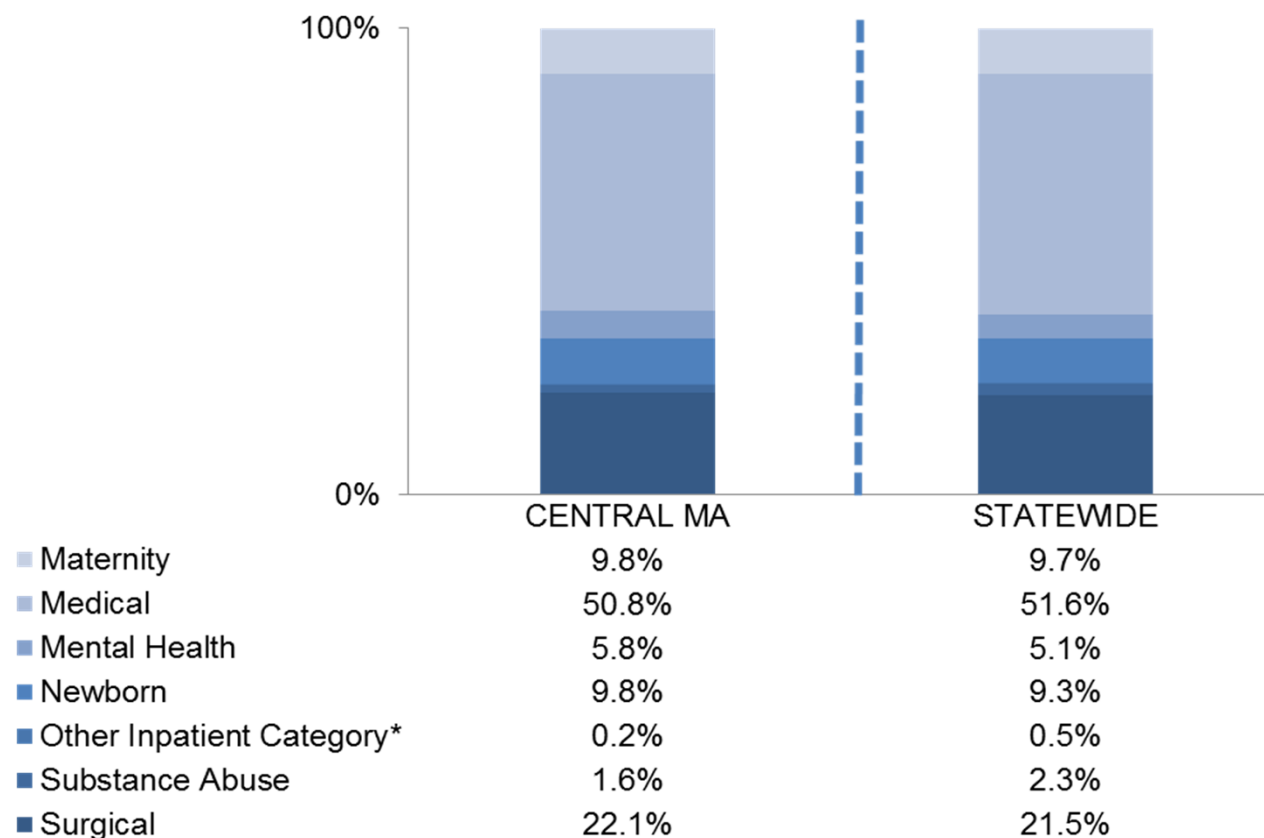
Age

	Inpatient Discharges			Emergency Department Discharges			Observation Stay Discharges		
	Regional		Statewide Comparison	Regional		Statewide Comparison	Regional		Statewide Comparison
Age (years)	#	%	%	#	%	%	#	%	%
0-19	12,972	15.5%	14.6%	68,469	25.4%	22.8%	1,968	8.0%	9.9%
20-44	19,140	22.9%	22.6%	114,728	42.6%	41.6%	5,971	24.2%	23.4%
45-64	21,763	26.1%	25.0%	58,738	21.8%	23.4%	8,024	32.6%	32.1%
65-84	21,725	26.0%	27.3%	21,149	7.9%	9.6%	6,338	25.7%	25.5%
85+	7,861	9.4%	10.4%	6,097	2.3%	2.8%	2,325	9.4%	9.0%

Race and Hispanic or Latino Ethnicity

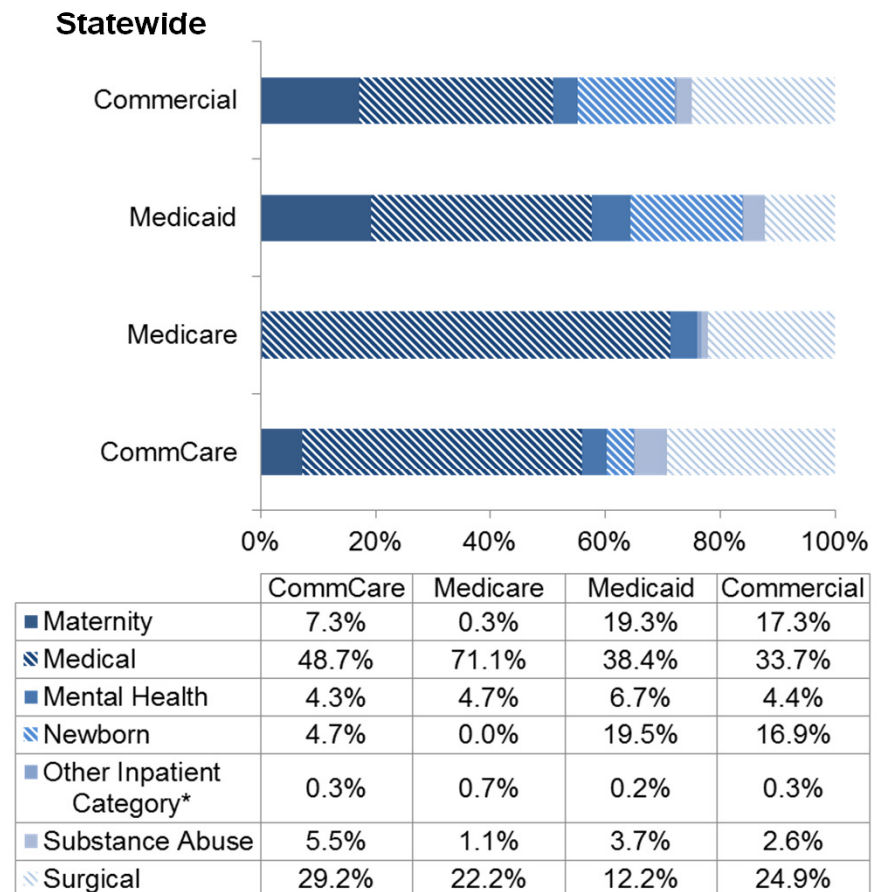
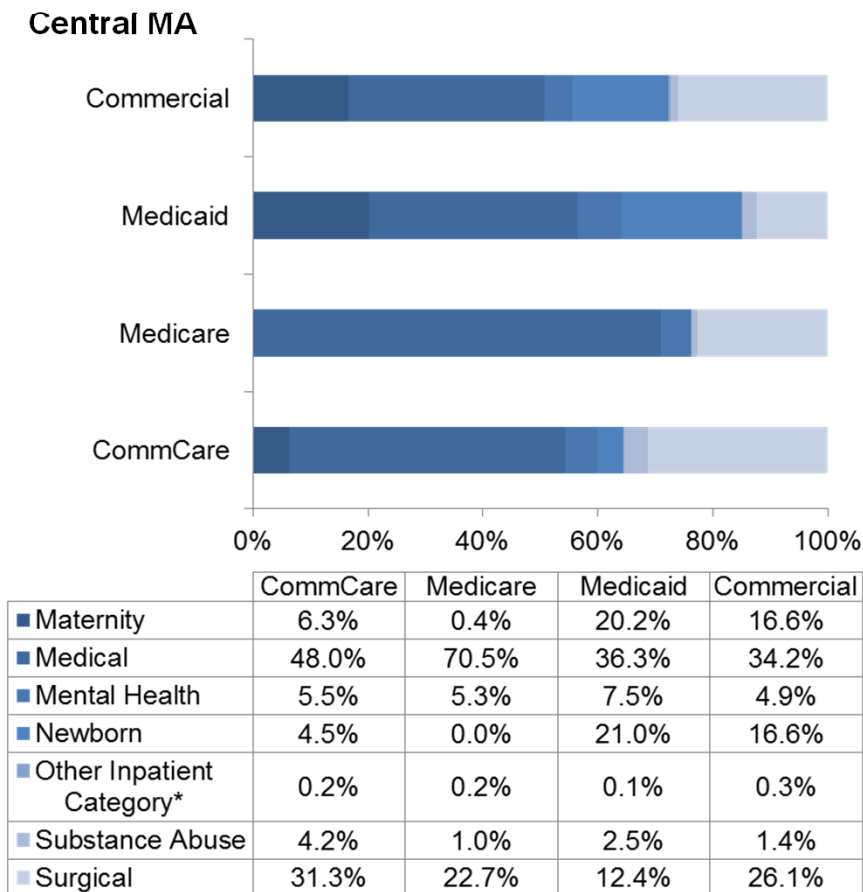
	Inpatient Discharges			Emergency Department Discharges			Observation Stay Discharges		
	Regional		Statewide Comparison	Regional		Statewide Comparison	Regional		Statewide Comparison
Race	#	%	%	#	%	%	#	%	%
Asian	1,466	1.8%	2.8%	3,642	1.4%	2.0%	344	1.4%	2.0%
Black/ African American	3,387	4.1%	7.6%	15,798	5.9%	11.4%	1,028	4.2%	9.8%
Other Races	6,587	7.9%	5.9%	37,436	13.9%	10.8%	2,190	8.9%	6.9%
Unknown / not specified	2,909	3.5%	4.9%	6,672	2.5%	4.0%	845	3.4%	4.1%
White	69,112	82.8%	78.9%	205,636	76.4%	71.9%	20,219	82.1%	77.1%
Ethnicity									
Hispanic or Latino	5,690	6.8%	8.2%	37,224	13.8%	15.0%	2,032	8.3%	9.7%

Inpatient Discharges by Inpatient Service Categories (Central MA vs. Statewide FY2012)



*Other Inpatient Category includes discharges that do not fall into one of the other major categories. Discharges in this category include procedures such as bone marrow transplants.

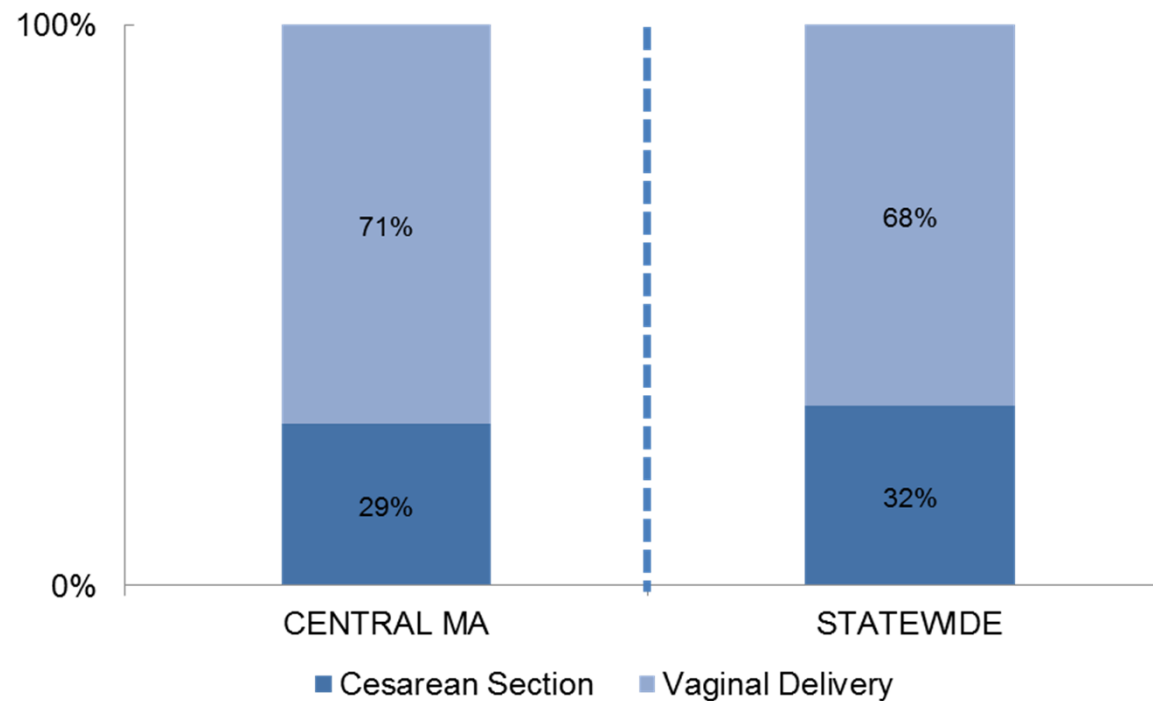
Percentage of Inpatient Discharges by Payer Type and Service Category (Central MA vs. Statewide FY2012)



*Other Inpatient Category includes discharges that do not fall into one of the other major categories. Discharges in this category include procedures such as bone marrow transplants.

Notes: The payer type is derived using the primary payer information reported by the hospital at the time of patient discharge and may change upon payment by the insurer or payer. Trends in total discharges by payer type may be the result of changes in the number of members enrolled in each payer type category. CommCare utilization may also include discharges for members covered by the CommCare Bridge program.

Percentage of Inpatient Delivery Discharges by Method of Delivery (Central MA vs. Statewide FY2012)



Top 10 MS-DRGs by Number of Inpatient Discharges (FY2012) for Central MA

MS-DRG	Title	Discharges	Average Charges	ALOS	% of Regional Discharges	Statewide % Comparison
795	Normal newborn	4,912	\$4,546	2.5	5.9%	5.9%
775	Vaginal delivery w/o complicating diagnoses	4,457	\$10,906	2.4	5.3%	4.9%
885	Psychoses	3,610	\$25,180	9.6	4.3%	3.8%
470	Major joint replacement or reattachment of lower extremity w/o MCC	2,303	\$37,868	3.3	2.8%	2.8%
794	Neonate w other significant problems	2,188	\$5,947	2.8	2.6%	2.1%
392	Esophagitis, gastroent & misc digest disorders w/o MCC	2,134	\$13,727	3.1	2.6%	2.7%
766	Cesarean section w/o CC/MCC	1,412	\$17,191	4.1	1.7%	1.7%
871	Septicemia or severe sepsis w/o MV 96+ hours w MCC	1,380	\$32,719	6.0	1.7%	1.6%
603	Cellulitis w/o MCC	1,333	\$11,002	3.2	1.6%	1.6%
194	Simple pneumonia & pleurisy w CC	1,159	\$15,671	3.7	1.4%	1.2%

Top 10 Principal Diagnosis Codes by Number of Emergency Department Discharges (FY2012) for Central MA

ICD-9 Diagnosis Code	Title	Discharges	Average Charges	% of Regional Discharges	Statewide % Comparison
789	Other symptoms involving abdomen and pelvis	13,544	\$3,857	5.0%	5.0%
786	Symptoms involving respiratory system and other chest symptoms	13,180	\$2,473	4.9%	4.4%
780	General symptoms	12,453	\$2,259	4.6%	4.5%
724	Other and unspecified disorders of back	7,871	\$1,540	2.9%	3.0%
787	Symptoms involving digestive system	7,260	\$2,088	2.7%	2.1%
784	Symptoms involving head and neck	6,606	\$2,399	2.5%	2.5%
682	Other cellulitis and abscess	6,303	\$1,425	2.3%	2.4%
959	Injury, other and unspecified	6,050	\$2,132	2.2%	2.5%
873	Other open wound of head	5,667	\$1,701	2.1%	2.0%
847	Sprains and strains of other and unspecified parts of back	5,280	\$1,764	2.0%	2.2%

Top 10 Principal Diagnosis Codes by Number of Observation Stay Discharges (FY2012) for Central MA

ICD-9 Diagnosis Code	Title	Discharges	Average Charges	% of Regional Discharges	Statewide % Comparison
786	Symptoms involving respiratory system and other chest symptoms	5,877	\$9,054	23.9%	21.8%
780	General symptoms	2,049	\$9,193	8.3%	7.9%
644	Early or threatened labor	779	\$758	3.2%	2.4%
789	Other symptoms involving abdomen and pelvis	765	\$10,885	3.1%	3.1%
427	Cardiac dysrhythmias	568	\$22,250	2.3%	2.3%
648	Other current conditions in the mother classifiable elsewhere, but complicating pregnancy, childbirth	487	\$1,837	2.0%	1.3%
276	Disorders of fluid, electrolyte, and acid-base balance	486	\$7,261	2.0%	2.1%
414	Other forms of chronic ischemic heart disease	389	\$33,650	1.6%	1.3%
787	Symptoms involving digestive system	361	\$8,746	1.5%	1.3%
493	Asthma	306	\$7,073	1.2%	1.3%

ACUTE CARE HOSPITAL UTILIZATION TRENDS IN MASSACHUSETTS FY2009- 2012

MASSACHUSETTS RESIDENTS

METRO BOSTON



Introduction

The Center for Health Information and Analysis (CHIA) is publishing these inpatient, emergency department, and observation stay utilization statistics of Massachusetts residents who have been discharged from Massachusetts acute care hospitals for the period beginning in Hospital Fiscal Year (FY) 2009 through 2012. In addition to a statewide report, 8 regional analyses were conducted based on combined Hospital Service Areas.

Each report includes demographic information for the region based on data from the American Community Survey. Differences in utilization may be driven by regional demographics such as age, race, ethnicity, and income.

These charts and tables can be used in conjunction with the associated data book. CHIA will monitor trends outlined in this report and update with additional years of data as it becomes available.

This analysis was produced using CHIA's Acute Hospital Case Mix Databases which are comprised of patient level discharge data submitted by Massachusetts acute hospitals prior to payment by a public payer or private insurer.

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REGIONAL REPORTING

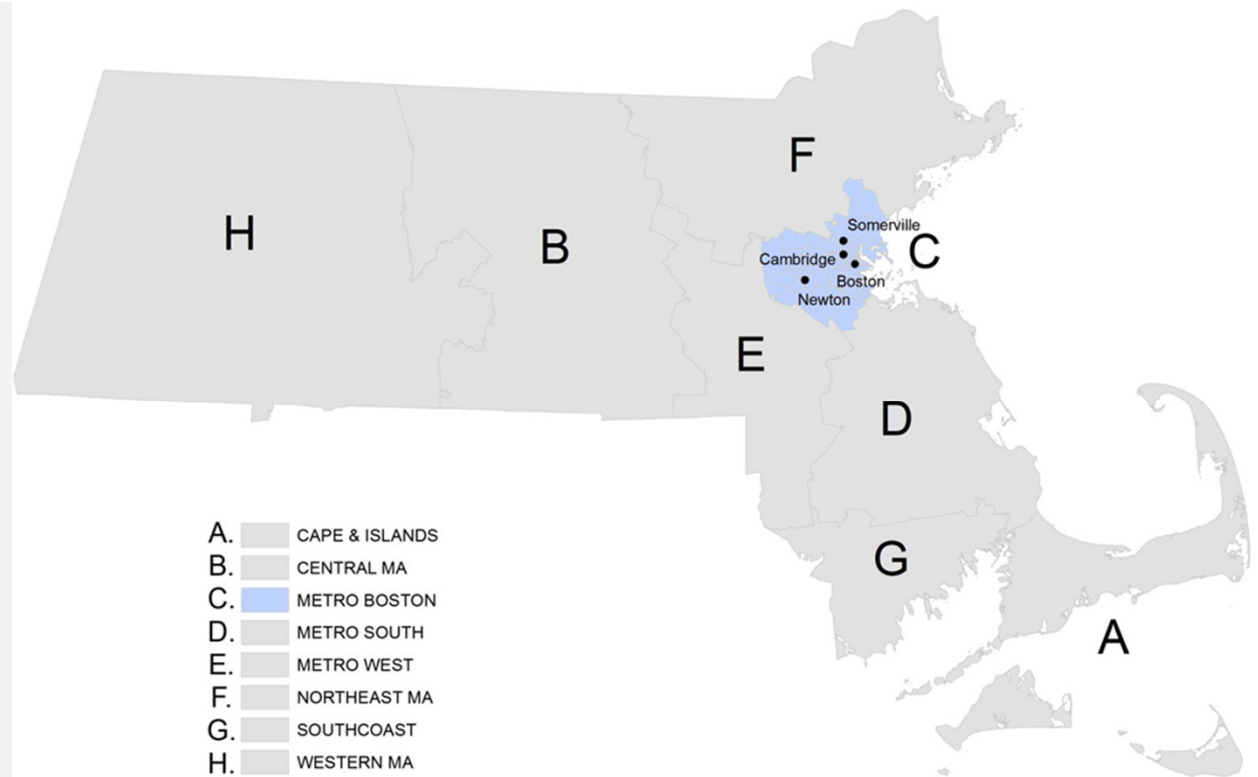
METRO BOSTON



Metro Boston

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Key Findings for Metro Boston*

Regional Demographics

- Metro Boston had the largest regional population, representing 23.5% of the statewide population.
- Metro Boston had the highest proportion of individuals between the ages of 20-44 (42.8%).
- Metro Boston had higher percentages of individuals identified as either Black/African American or Asian compared to statewide. In Metro Boston, 13.6% of individuals identified as Hispanic or Latino compared to 9.6% of individuals statewide.
- Metro Boston had a higher mean household income than the state (\$96,304 vs. \$89,965) but a higher percentage of residents below the poverty level than the state (14.0% vs. 10.6%).

Acute Hospital Utilization

- Inpatient discharges by payer type generally followed the statewide trend; however, Commercial and Medicaid represented higher proportions of inpatient discharges (35.3% and 20.2%, respectively) compared to statewide (33.4% and 17.8%, respectively). Please note: Trends in total discharges by payer type may be the result of changes in the number of members enrolled in each payer type category.
- Metro Boston had higher inpatient hospital utilization in Maternity and Newborn service categories compared to statewide, which reflected the region's higher proportion of individuals between the ages of 20-44.
- Metro Boston had a lower percentage of Cesarean section delivery discharges at 29.2% compared to the statewide percentage of 31.9%.

*All key findings are based on 2012 data unless otherwise indicated.

Notes: The payer type is derived using the primary payer information reported by the hospital at the time of patient discharge and may change upon payment by the insurer or payer.

Population at a Glance for Metro Boston



Demographics*		Metro Boston	Statewide
Total Population		1,541,317 (23.5% of the statewide population)	6,560,595
Gender			
	<i>Male</i>	47.9%	48.4%
	<i>Female</i>	52.1%	51.6%
Age			
	<i>0-19</i>	22.2%	24.7%
	<i>20-44</i>	42.8%	33.8%
	<i>45-64</i>	23.0%	27.7%
	<i>65-84</i>	10.1%	11.7%
	<i>85+</i>	1.9%	2.2%
Race			
	<i>White</i>	67.5%	81.0%
	<i>Black/African American</i>	13.9%	6.8%
	<i>Asian</i>	9.8%	5.4%
	<i>Other**</i>	4.8%	4.2%
	<i>Two or More Races</i>	4.1%	2.6%
Ethnicity			
	<i>Hispanic or Latino</i>	13.1%	9.6%
Income			
	<i>Mean Household Income</i>	\$96,304	\$89,965
	<i>Below Poverty Level</i>	14.0%	10.6%

*Source: American Community Survey 5-year Estimate (2008-2012) U.S. Department of Commerce United States Census Bureau <http://factfinder2.census.gov>

**Includes Native and Pacific Islander and American Indian/Alaskan Native

Acute Hospital Utilization Trends (FY2009-2012) for Metro Boston

Discharges

	Discharges				Regional % Change		Statewide % Change	
	2009	2010	2011	2012	2011-2012	2009-2012	2011-2012	2009-2012
Inpatient Discharges	181,596	183,427	181,405	173,089	-4.6%	-4.7%	-2.9%	-3.0%
Emergency Department Discharges	525,974	525,936	532,456	542,454	1.9%	3.1%	1.6%	0.7%
Observation Stay Discharges	34,443	36,219	38,160	44,295	16.1%	28.6%	12.2%	20.3%
Total	742,013	745,582	752,021	759,838	1.0%	2.4%	1.0%	0.7%

Regional Discharges as a Percentage of Statewide Discharges*

	2009	2010	2011	2012
% of Statewide Inpatient Discharges	22.5%	22.8%	22.5%	22.1%
% of Statewide Emergency Department Discharges	21.9%	21.9%	22.3%	22.4%
% of Statewide Observation Stay Discharges	22.9%	23.0%	23.7%	24.5%
% of Statewide Total Combined Discharges	22.1%	22.2%	22.4%	22.4%

*This region's population represents 23.5% of the statewide population.

Discharge Trends by Payer Type (FY2009-2012) for Metro Boston

Inpatient Discharges

	Discharges				Regional % Change		Statewide % Change	
	2009	2010	2011	2012	2011-2012	2009-2012	2011-2012	2009-2012
CommCare	2,769	3,624	3,343	3,265	-2.3%	17.9%	0.9%	28.0%
Commercial	67,502	67,081	63,416	61,050	-3.7%	-9.6%	-4.5%	-10.9%
Medicaid	33,665	32,943	35,349	34,905	-1.3%	3.7%	1.8%	4.3%
Medicare	70,591	72,686	71,782	66,682	-7.1%	-5.5%	-4.1%	-0.7%
Other Payers*	7,069	7,093	7,515	7,187	-4.4%	1.7%	0.4%	2.8%
Total	181,596	183,427	181,405	173,089	-4.6%	-4.7%	-2.9%	-3.0%

Emergency Department Discharges

	Discharges				Regional % Change		Statewide % Change	
	2009	2010	2011	2012	2011-2012	2009-2012	2011-2012	2009-2012
CommCare	16,495	18,557	20,822	18,052	-13.3%	9.4%	-0.9%	31.1%
Commercial	213,752	201,925	199,072	189,101	-5.0%	-11.5%	-5.1%	-14.6%
Medicaid	141,735	145,704	148,116	167,190	12.9%	18.0%	9.3%	13.4%
Medicare	76,185	82,360	87,243	90,617	3.9%	18.9%	4.8%	13.7%
Other Payers*	77,807	77,390	77,203	77,494	0.4%	-0.4%	-0.3%	-1.7%
Total	525,974	525,936	532,456	542,454	1.9%	3.1%	1.6%	0.7%

Observation Stay Discharges

	Discharges				Regional % Change		Statewide % Change	
	2009	2010	2011	2012	2011-2012	2009-2012	2011-2012	2009-2012
CommCare	725	1,138	1,034	1,210	17.0%	66.9%	23.9%	65.5%
Commercial	14,171	14,512	14,208	15,406	8.4%	8.7%	3.1%	-0.1%
Medicaid	6,946	7,811	8,339	9,464	13.5%	36.3%	8.7%	25.4%
Medicare	10,387	10,550	12,277	15,638	27.4%	50.6%	24.6%	42.7%
Other Payers*	2,214	2,208	2,302	2,577	11.9%	16.4%	8.4%	21.6%
Total	34,443	36,219	38,160	44,295	16.1%	28.6%	12.2%	20.3%

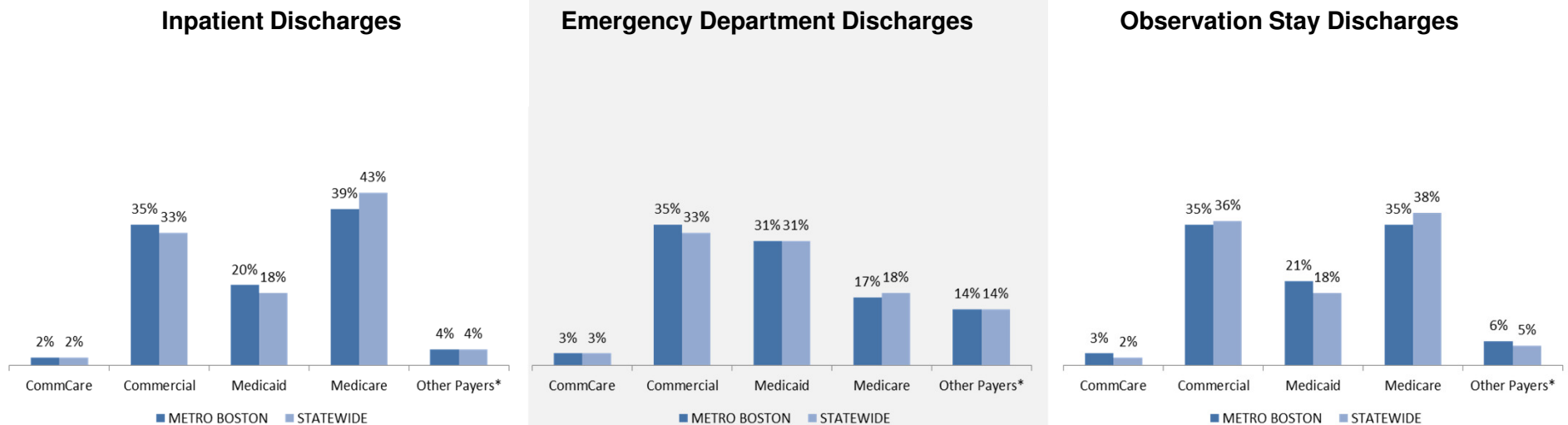
*Other payers include automobile insurance, Health Safety Net, self-pay, workman's compensation and discharges missing payer information.

Notes: The payer type is derived using the primary payer information reported by the hospital at the time of patient discharge and may change upon payment by the insurer or payer. CommCare utilization may also include discharges for members covered by the CommCare Bridge program.

Please note:
Trends in total discharges by payer type may be the result of changes in the number of members enrolled in each payer type category.

Percentage of Discharges by Payer Type (FY2012) for Metro Boston

The payer type is derived using the primary payer information reported by the hospital at the time of patient discharge and may change upon payment by the insurer or payer. Trends in total discharges by payer type may be the result of changes in the number of members enrolled in each payer type category. CommCare utilization may also include discharges for members covered by the CommCare Bridge program.



*Other payers include automobile insurance, Health Safety Net, self-pay, workman's compensation and discharges missing payer information.

Discharges by Demographic Information (Metro Boston vs. Statewide FY2012)

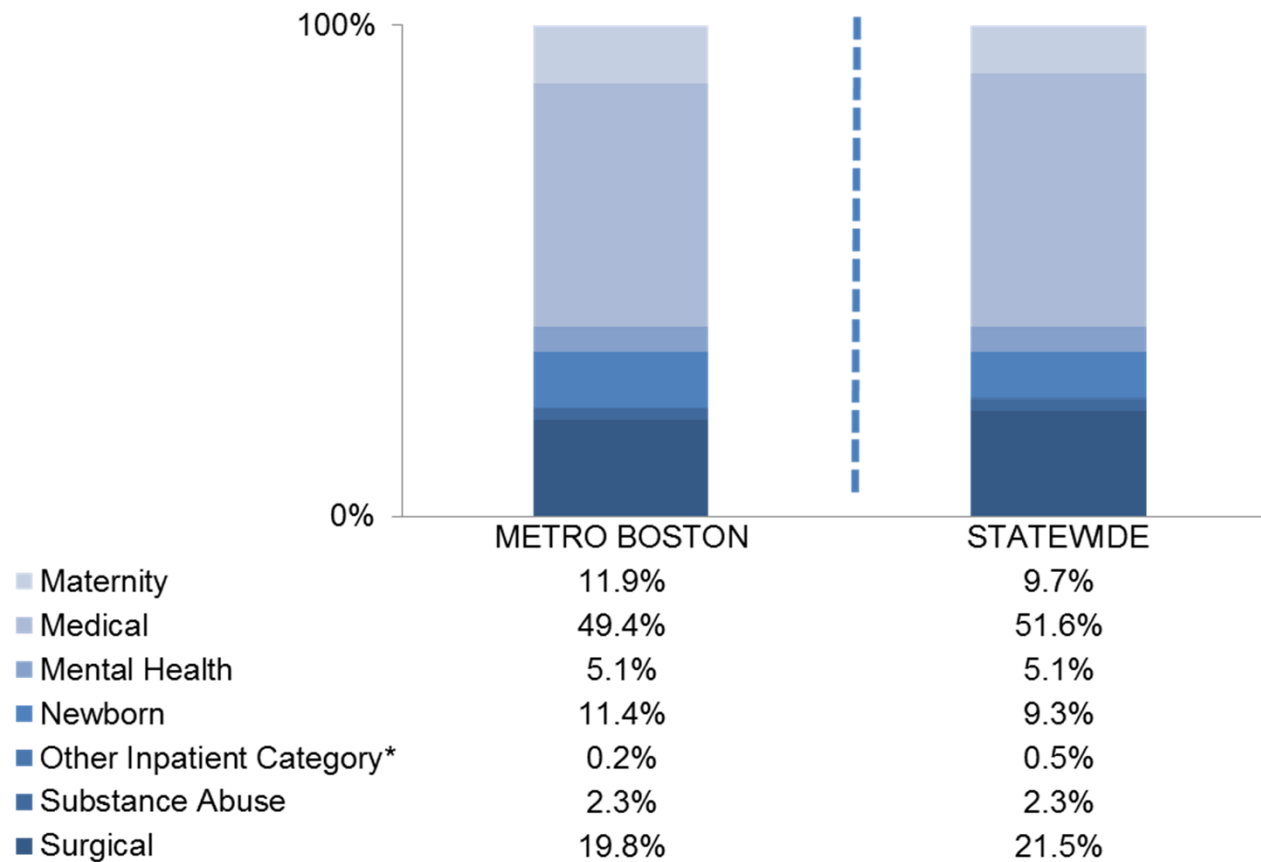
Age

	Inpatient Discharges			Emergency Department Discharges			Observation Stay Discharges		
	Regional		Statewide Comparison	Regional		Statewide Comparison	Regional		Statewide Comparison
Age (years)	#	%	%	#	%	%	#	%	%
0-19	29,023	16.8%	14.6%	119,967	22.1%	22.8%	4,759	10.7%	9.9%
20-44	43,935	25.4%	22.6%	231,228	42.6%	41.6%	11,269	25.4%	23.4%
45-64	41,191	23.8%	25.0%	126,807	23.4%	23.4%	14,015	31.6%	32.1%
65-84	42,382	24.5%	27.3%	50,142	9.2%	9.6%	10,585	23.9%	25.5%
85+	16,558	9.6%	10.4%	14,306	2.6%	2.8%	3,667	8.3%	9.0%

Race and Hispanic or Latino Ethnicity

	Inpatient Discharges			Emergency Department Discharges			Observation Stay Discharges		
	Regional		Statewide Comparison	Regional		Statewide Comparison	Statewide Comparison		Statewide Comparison
Race	#	%	%	#	%	%	#	%	%
Asian	8,978	5.2%	2.8%	19,224	3.5%	2.0%	1,537	3.5%	2.0%
Black/African American	29,063	16.8%	7.6%	129,435	23.9%	11.4%	9,810	22.1%	9.8%
Other Races	13,868	8.0%	5.9%	68,567	12.6%	10.8%	4,337	9.8%	6.9%
Unknown/not specified	14,086	8.1%	4.9%	41,886	7.7%	4.0%	3,370	7.6%	4.1%
White	107,094	61.9%	78.9%	283,342	52.2%	71.9%	25,241	57.0%	77.1%
Ethnicity									
Hispanic or Latino	19,857	11.5%	8.2%	90,691	16.7%	15.0%	6,231	14.1%	9.7%

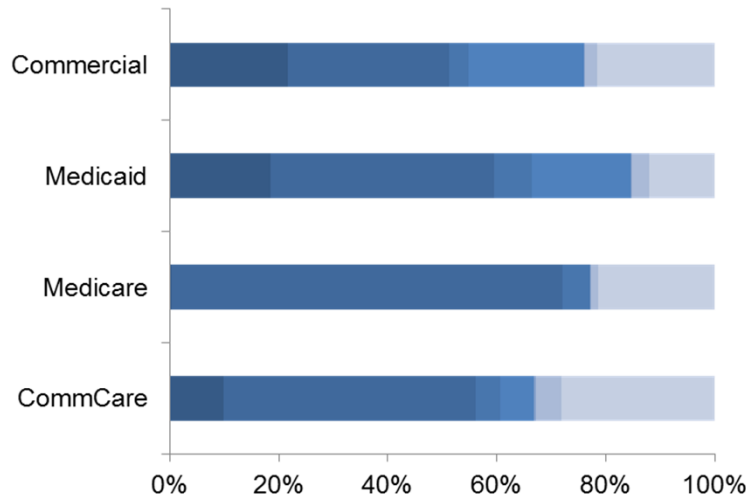
Inpatient Discharges by Inpatient Service Categories (Metro Boston vs. Statewide FY2012)



*Other Inpatient Category includes discharges that do not fall into one of the other major categories. Discharges in this category include procedures such as bone marrow transplants.

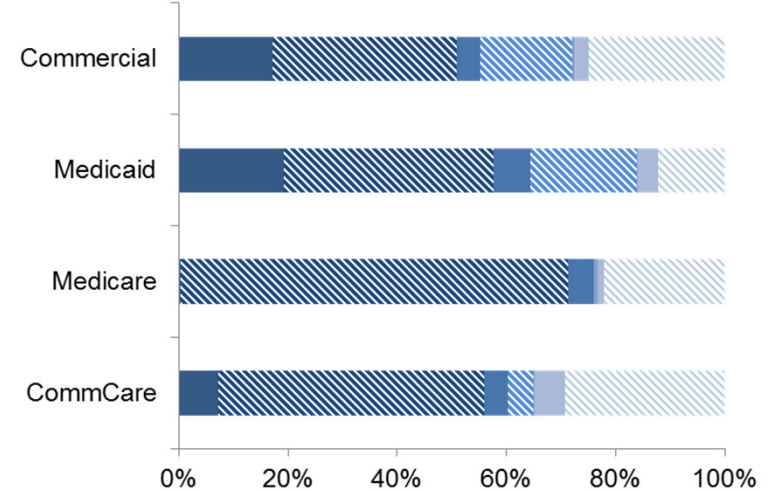
Percentage of Inpatient Discharges by Payer Type and Service Category (Metro Boston vs. Statewide FY2012)

Metro Boston



	CommCare	Medicare	Medicaid	Commercial
■ Maternity	9.8%	0.2%	18.5%	21.7%
■ Medical	46.3%	71.8%	41.0%	29.5%
■ Mental Health	4.5%	5.0%	6.8%	3.5%
■ Newborn	6.2%	0.0%	18.3%	21.2%
■ Other Inpatient Category*	0.4%	0.2%	0.2%	0.2%
■ Substance Abuse	4.7%	1.3%	3.1%	2.3%
■ Surgical	28.1%	21.4%	12.0%	21.6%

Statewide

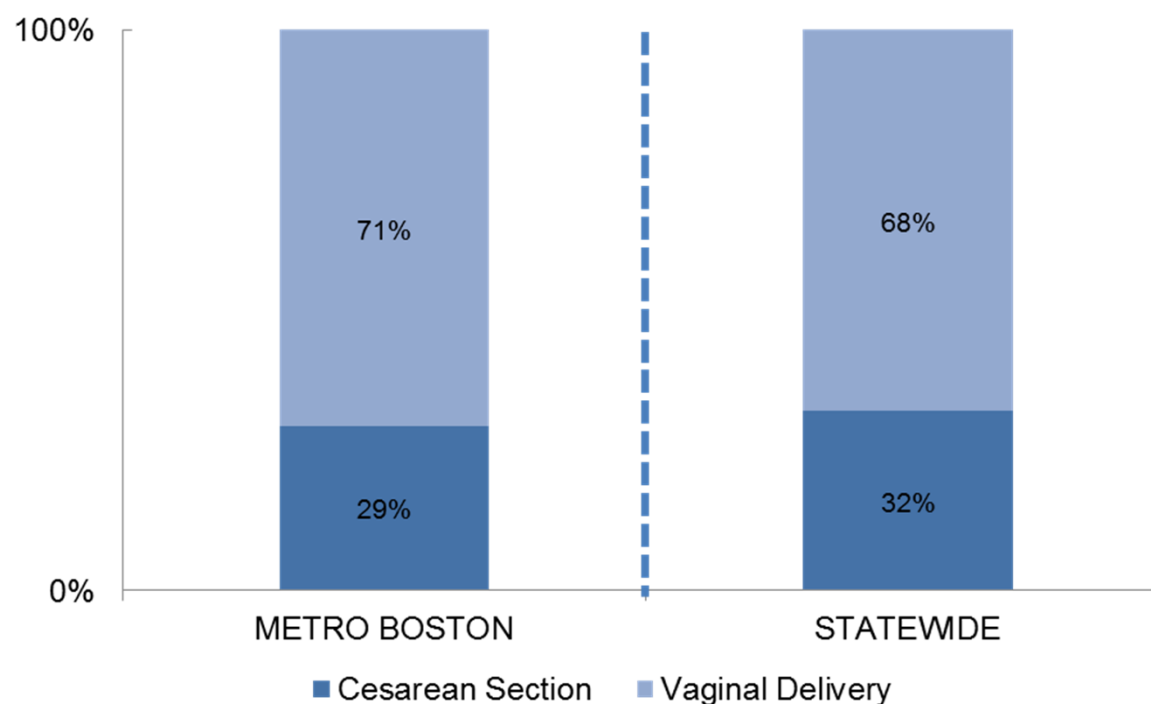


	CommCare	Medicare	Medicaid	Commercial
■ Maternity	7.3%	0.3%	19.3%	17.3%
■ Medical	48.7%	71.1%	38.4%	33.7%
■ Mental Health	4.3%	4.7%	6.7%	4.4%
■ Newborn	4.7%	0.0%	19.5%	16.9%
■ Other Inpatient Category*	0.3%	0.7%	0.2%	0.3%
■ Substance Abuse	5.5%	1.1%	3.7%	2.6%
■ Surgical	29.2%	22.2%	12.2%	24.9%

*Other Inpatient Category includes discharges that do not fall into one of the other major categories. Discharges in this category include procedures such as bone marrow transplants.

Notes: The payer type is derived using the primary payer information reported by the hospital at the time of patient discharge and may change upon payment by the insurer or payer. Trends in total discharges by payer type may be the result of changes in the number of members enrolled in each payer type category. CommCare utilization may also include discharges for members covered by the CommCare Bridge program.

Percentage of Inpatient Delivery Discharges by Method of Delivery (Metro Boston vs. Statewide FY2012)



Top 10 MS-DRGs by Number of Inpatient Discharges (FY2012) for Metro Boston

MS-DRG	Title	Discharges	Average Charges	ALOS	% of Regional Discharges	Statewide % Comparison
795	Normal newborn	12,628	\$3,764	2.6	7.3%	5.9%
775	Vaginal delivery w/o complicating diagnoses	10,501	\$14,623	2.6	6.1%	4.9%
885	Psychoses	6,564	\$21,030	10.4	3.8%	3.8%
794	Neonate w other significant problems	4,245	\$5,938	3.0	2.5%	2.1%
392	Esophagitis, gastroent & misc digest disorders w/o MCC	4,201	\$13,037	2.8	2.4%	2.7%
470	Major joint replacement or reattachment of lower extremity w/o MCC	3,967	\$34,743	3.4	2.3%	2.8%
766	Cesarean section w/o CC/MCC	3,057	\$19,444	4.3	1.8%	1.7%
897	Alcohol/drug abuse or dependence w/o rehabilitation therapy w/o MCC	2,745	\$11,938	4.2	1.6%	1.4%
603	Cellulitis w/o MCC	2,661	\$12,141	3.3	1.5%	1.6%
765	Cesarean section w CC/MCC	2,397	\$27,178	5.4	1.4%	1.1%

Top 10 Principal Diagnosis Codes by Number of Emergency Department Discharges (FY2012) for Metro Boston

ICD-9 Diagnosis Code	Title	Discharges	Average Charges	% of Regional Discharges	Statewide % Comparison
786	Symptoms involving respiratory system and other chest symptoms	24,503	\$2,457	4.5%	4.4%
789	Other symptoms involving abdomen and pelvis	24,161	\$3,036	4.5%	5.0%
780	General symptoms	23,553	\$2,124	4.3%	4.5%
959	Injury, other and unspecified	17,470	\$1,882	3.2%	2.5%
724	Other and unspecified disorders of back	15,739	\$1,300	2.9%	3.0%
784	Symptoms involving head and neck	14,533	\$1,992	2.7%	2.5%
305	Nondependent abuse of drugs	12,592	\$1,383	2.3%	1.5%
682	Other cellulitis and abscess	11,921	\$1,270	2.2%	2.4%
787	Symptoms involving digestive system	11,506	\$1,701	2.1%	2.1%
719	Other and unspecified disorders of joint	11,059	\$1,314	2.0%	1.7%

Top 10 Principal Diagnosis Codes by Number of Observation Stay Discharges (FY2012) for Metro Boston

ICD-9 Diagnosis Code	Title	Discharges	Average Charges	% of Regional Discharges	Statewide % Comparison
786	Symptoms involving respiratory system and other chest symptoms	8,648	\$8,013	19.5%	21.8%
780	General symptoms	3,420	\$9,811	7.7%	7.9%
789	Other symptoms involving abdomen and pelvis	1,592	\$9,790	3.6%	3.1%
276	Disorders of fluid, electrolyte, and acid-base balance	932	\$7,758	2.1%	2.1%
427	Cardiac dysrhythmias	799	\$14,759	1.8%	2.3%
493	Asthma	732	\$6,840	1.7%	1.3%
787	Symptoms involving digestive system	706	\$9,061	1.6%	1.3%
644	Early or threatened labor	670	\$2,116	1.5%	2.4%
474	Chronic disease of tonsils and adenoids	659	\$8,145	1.5%	1.1%
682	Other cellulitis and abscess	594	\$6,931	1.3%	0.9%

ACUTE CARE HOSPITAL UTILIZATION TRENDS IN MASSACHUSETTS FY2009- 2012

MASSACHUSETTS RESIDENTS

METRO SOUTH



Introduction

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Each report includes demographic information for the region based on data from the American Community Survey. Differences in utilization may be driven by regional demographics such as age, race, ethnicity, and income.

These charts and tables can be used in conjunction with the associated data books. CHIA will monitor trends outlined in this report and update with additional years of data as it becomes available.

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REGIONAL REPORTING

METRO SOUTH

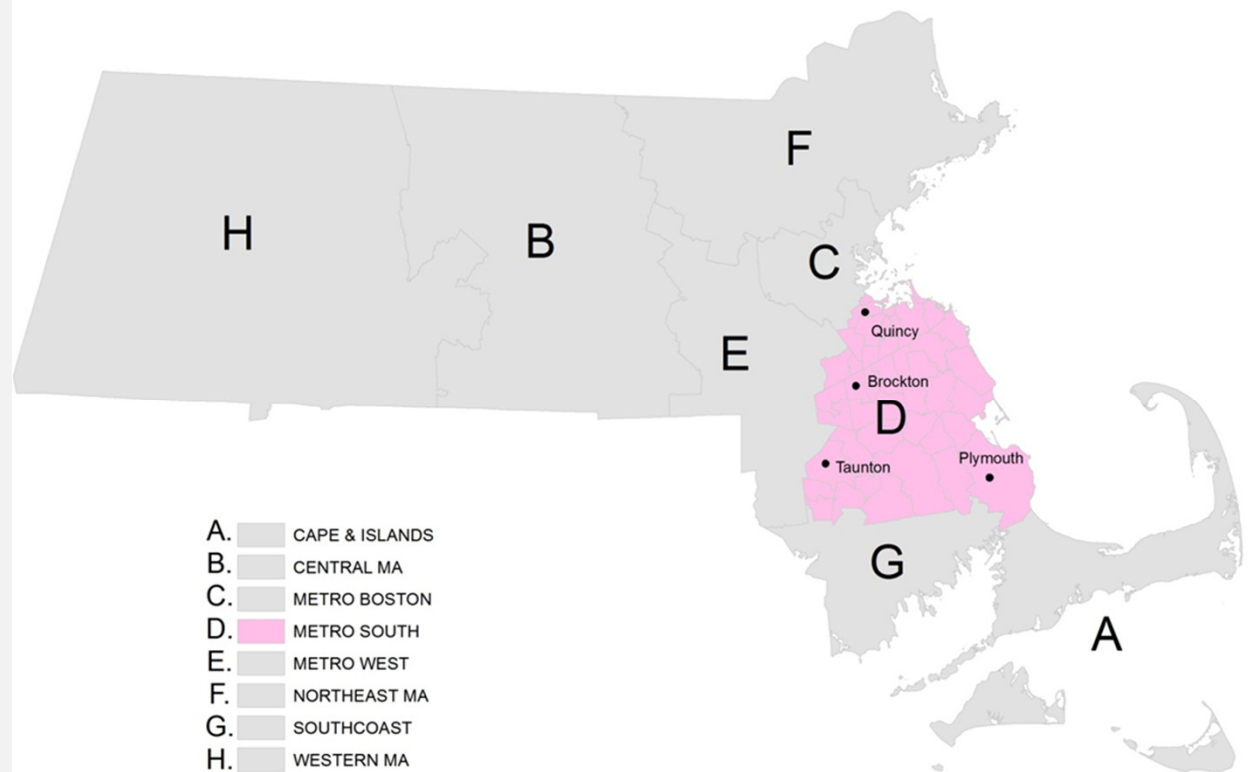


center
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information
and analysis

Metro South

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Key Findings for Metro South*

Regional Demographics

- Metro South had a similar demographic profile compared to statewide, but had one of the lowest proportions of individuals identified as Hispanic or Latino at 3.5% compared to statewide at 9.6%.
- While Metro South had the same mean household income as the statewide average, the region's poverty level of 7.0% was lower than the statewide poverty level of 9.6%.

Acute Hospital Utilization

- Medicaid observation stay discharges increased by 55.5% between 2009 and 2012, while the statewide Medicaid observation stay discharges increased by 25.4% during the same time period. Please note: Trends in total discharges by payer type may be the result of changes in the number of members enrolled in each payer type category.
- Metro South had the highest percentage of Cesarean section delivery discharges in the state at 37.1%, compared to the statewide percentage of 31.9%.

*All key findings are based on 2012 data unless otherwise indicated.

Notes: The payer type is derived using the primary payer information reported by the hospital at the time of patient discharge and may change upon payment by the insurer or payer.

Population at a Glance for Metro South



Demographics*		Metro South	Statewide
Total Population		809,553 (12.3% of the statewide population)	6,560,595
Gender			
	<i>Male</i>	48.3%	48.4%
	<i>Female</i>	51.7%	51.6%
Age			
	<i>0-19</i>	25.4%	24.7%
	<i>20-44</i>	31.3%	33.8%
	<i>45-64</i>	29.2%	27.7%
	<i>65-84</i>	12.1%	11.7%
	<i>85+</i>	2.0%	2.2%
Race			
	<i>White</i>	83.4%	81.0%
	<i>Black/African American</i>	8.7%	6.8%
	<i>Asian</i>	4.1%	5.4%
	<i>Other**</i>	2.0%	4.2%
	<i>Two or More Races</i>	1.8%	2.6%
Ethnicity			
	<i>Hispanic or Latino</i>	3.5%	9.6%
Income			
	<i>Mean Household Income</i>	\$89,476	\$89,965
	<i>Below Poverty Level</i>	7.6%	10.6%

*Source: American Community Survey 5-year Estimate (2008-2012) U.S. Department of Commerce United States Census Bureau <http://factfinder2.census.gov/>

**Includes Native and Pacific Islander and American Indian/Alaskan Native

Acute Hospital Utilization Trends (FY2009-2012) for Metro South

Discharges

	Discharges				Regional % Change		Statewide % Change	
	2009	2010	2011	2012	2011-2012	2009-2012	2011-2012	2009-2012
Inpatient Discharges	115,041	113,009	111,029	108,567	-2.2%	-5.6%	-2.9%	-3.0%
Emergency Department Discharges	298,172	296,284	291,132	298,571	2.6%	0.1%	1.6%	0.7%
Observation Stay Discharges	16,474	17,104	18,370	21,765	18.5%	32.1%	12.2%	20.3%
Total	429,687	426,397	420,531	428,903	2.0%	-0.2%	1.0%	0.7%

Regional Discharges as a Percentage of Statewide Discharges*

	2009	2010	2011	2012
% of Statewide Inpatient Discharges	14.3%	14.0%	13.8%	13.9%
% of Statewide Emergency Department Discharges	12.4%	12.4%	12.2%	12.3%
% of Statewide Observation Stay Discharges	11.0%	10.9%	11.4%	12.0%
% of Statewide Total Combined Discharges	12.8%	12.7%	12.6%	12.7%

*This region's population represents 12.3% of the statewide population.

Discharge Trends by Payer Type (FY2009-2012) for Metro South

Inpatient Discharges

	Discharges				Regional % Change		Statewide % Change	
	2009	2010	2011	2012	2011-2012	2009-2012	2011-2012	2009-2012
CommCare	1,726	2,021	1,920	2,140	11.5%	24.0%	0.9%	28.0%
Commercial	44,451	42,677	39,933	38,814	-2.8%	-12.7%	-4.5%	-10.9%
Medicaid	15,165	14,863	15,569	15,344	-1.4%	1.2%	1.8%	4.3%
Medicare	49,452	49,186	49,338	47,780	-3.2%	-3.4%	-4.1%	-0.7%
Other Payers*	4,247	4,262	4,269	4,489	5.2%	5.7%	0.4%	2.8%
Total	115,041	113,009	111,029	108,567	-2.2%	-5.6%	-2.9%	-3.0%

Emergency Department Discharges

	Discharges				Regional % Change		Statewide % Change	
	2009	2010	2011	2012	2011-2012	2009-2012	2011-2012	2009-2012
CommCare	9,380	10,839	9,997	11,124	11.3%	18.6%	-0.9%	31.1%
Commercial	121,170	115,571	113,899	110,316	-3.1%	-9.0%	-5.1%	-14.6%
Medicaid	76,280	76,848	77,329	84,763	9.6%	11.1%	9.3%	13.4%
Medicare	45,177	47,468	45,147	47,652	5.5%	5.5%	4.8%	13.7%
Other Payers*	46,165	45,558	44,760	44,716	-0.1%	-3.1%	-0.3%	-1.7%
Total	298,172	296,284	291,132	298,571	2.6%	0.1%	1.6%	0.7%

Observation Stay Discharges

	Discharges				Regional % Change		Statewide % Change	
	2009	2010	2011	2012	2011-2012	2009-2012	2011-2012	2009-2012
CommCare	339	427	417	568	36.2%	67.6%	23.9%	65.5%
Commercial	8,039	8,003	7,895	8,798	11.4%	9.4%	3.1%	-0.1%
Medicaid	2,515	2,534	3,351	3,912	16.7%	55.5%	8.7%	25.4%
Medicare	4,826	5,280	5,861	7,500	28.0%	55.4%	24.6%	42.7%
Other Payers*	755	860	846	987	16.7%	30.7%	8.4%	21.6%
Total	16,474	17,104	18,370	21,765	18.5%	32.1%	12.2%	20.3%

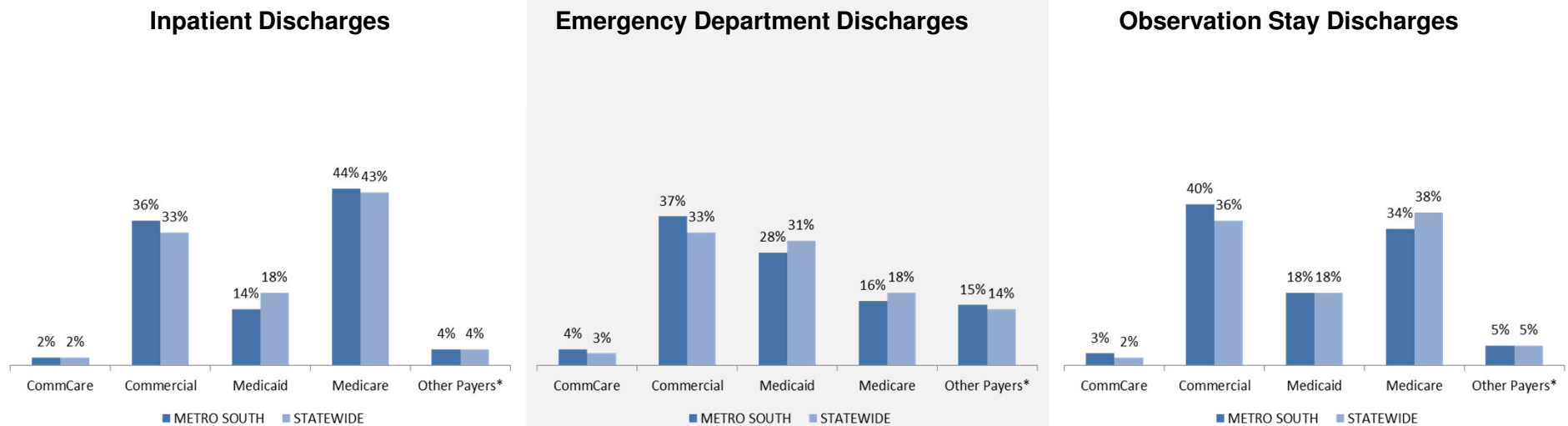
*Other payers include automobile insurance, Health Safety Net, self-pay, workman's compensation and discharges missing payer information.

Notes: The payer type is derived using the primary payer information reported by the hospital at the time of patient discharge and may change upon payment by the insurer or payer. CommCare utilization may also include discharges for members covered by the CommCare Bridge program.

Please note:
Trends in total discharges by payer type may be the result of changes in the number of members enrolled in each payer type category.

Percentage of Discharges by Payer Type (FY2012) for Metro South

The payer type is derived using the primary payer information reported by the hospital at the time of patient discharge and may change upon payment by the insurer or payer. Trends in total discharges by payer type may be the result of changes in the number of members enrolled in each payer type category. CommCare utilization may also include discharges for members covered by the CommCare Bridge program.



*Other payers include automobile insurance, Health Safety Net, self-pay, workman's compensation and discharges missing payer information.

Discharges by Demographic Information (Metro South vs. Statewide FY2012)

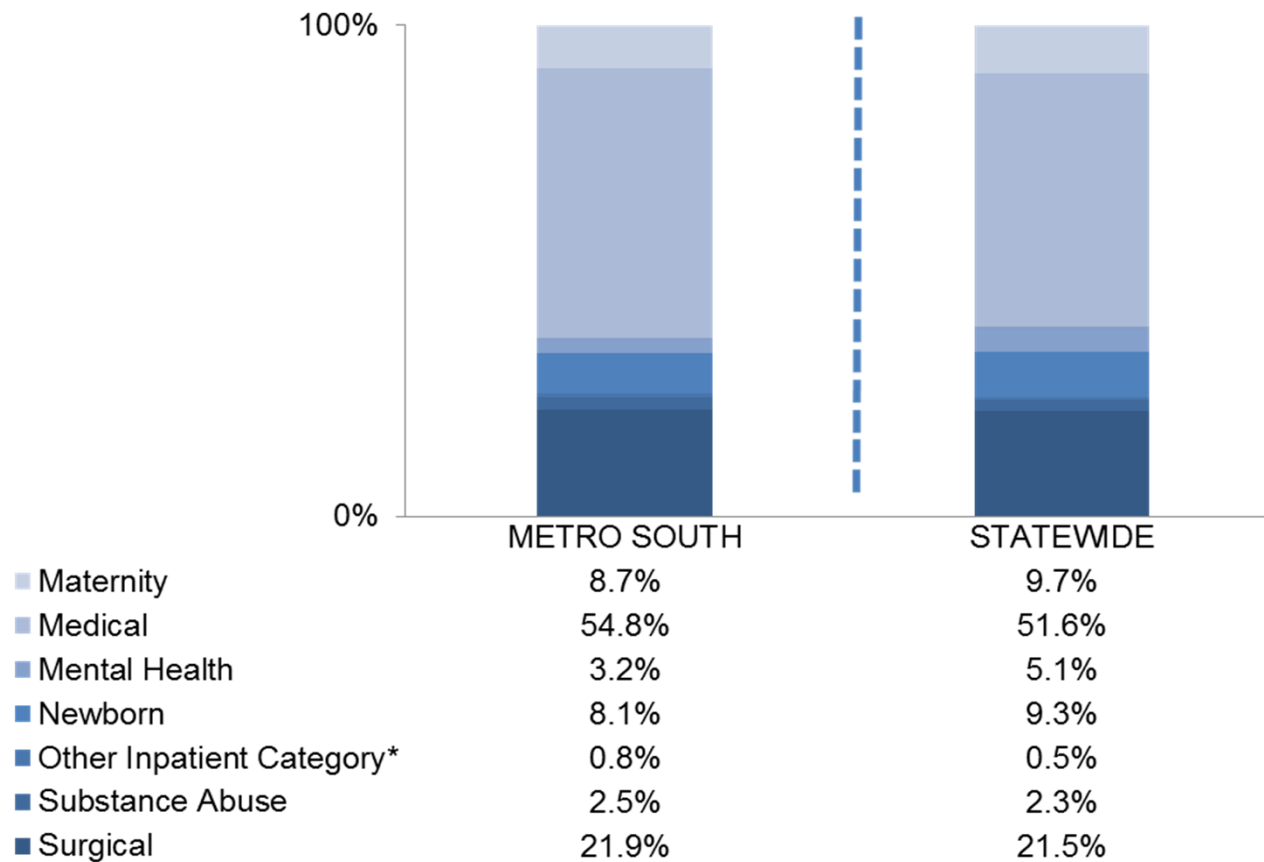
Age

	Inpatient Discharges			Emergency Department Discharges			Observation Stay Discharges		
	Regional		Statewide Comparison	Regional		Statewide Comparison	Regional		Statewide Comparison
Age (years)	#	%	%	#	%	%	#	%	%
0-19	14,151	13.0%	14.6%	67,470	22.6%	22.8%	2,187	10.0%	9.9%
20-44	23,364	21.5%	22.6%	126,024	42.2%	41.6%	5,240	24.1%	23.4%
45-64	28,489	26.2%	25.0%	71,673	24.0%	23.4%	7,482	34.4%	32.1%
65-84	31,825	29.3%	27.3%	26,547	8.9%	9.6%	5,224	24.0%	25.5%
85+	10,738	9.9%	10.4%	6,857	2.3%	2.8%	1,630	7.5%	9.0%

Race and Hispanic or Latino Ethnicity

	Inpatient Discharges			Emergency Department Discharges			Observation Stay Discharges		
	Regional		Statewide Comparison	Regional		Statewide Comparison	Regional		Statewide Comparison
Race	#	%	%	#	%	%	#	%	%
Asian	2,331	2.1%	2.8%	4,404	1.5%	2.0%	352	1.6%	2.0%
Black/African American	9,101	8.4%	7.6%	41,702	14.0%	11.4%	2,275	10.5%	9.8%
Other Races	3,772	3.5%	5.9%	15,626	5.2%	10.8%	838	3.9%	6.9%
Unknown/not specified	3,194	2.9%	4.9%	4,528	1.5%	4.0%	541	2.5%	4.1%
White	90,169	83.1%	78.9%	232,311	77.8%	71.9%	17,759	81.6%	77.1%
Ethnicity									
Hispanic or Latino	2,990	2.8%	8.2%	14,578	4.9%	15.0%	792	3.6%	9.7%

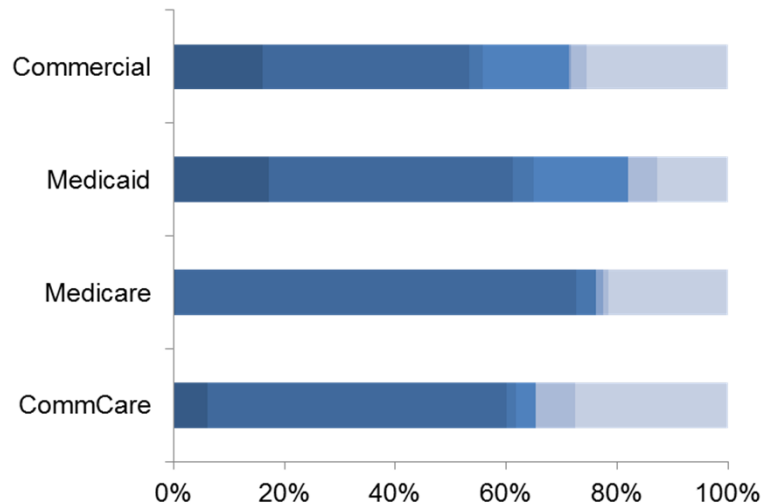
Inpatient Discharges by Inpatient Service Categories (Metro South vs. Statewide FY2012)



*Other Inpatient Category includes discharges that do not fall into one of the other major categories. Discharges in this category include procedures such as bone marrow transplants.

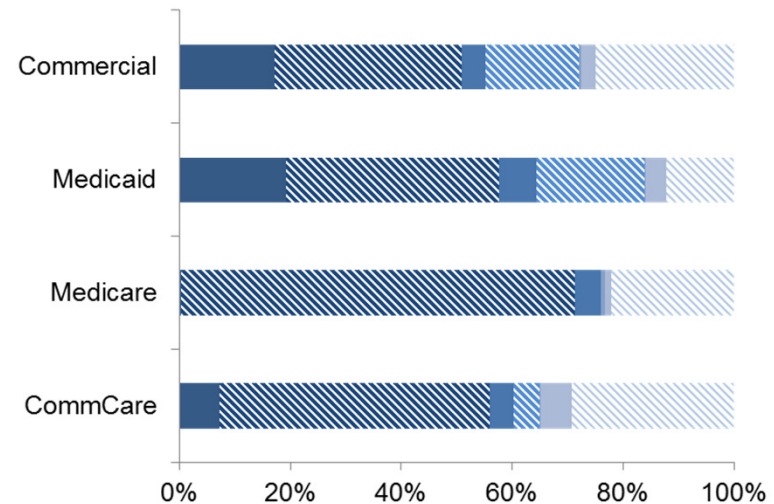
Percentage of Inpatient Discharges by Payer Type and Service Category (Metro South vs. Statewide FY2012)

Metro South



	CommCare	Medicare	Medicaid	Commercial
■ Maternity	6.1%	0.2%	17.3%	16.1%
■ Medical	54.0%	72.5%	43.9%	37.2%
■ Mental Health	1.6%	3.4%	3.7%	2.5%
■ Newborn	3.6%	0.0%	17.0%	15.5%
■ Other Inpatient Category*	0.0%	1.3%	0.1%	0.4%
■ Substance Abuse	7.2%	0.9%	5.1%	2.8%
■ Surgical	27.5%	21.6%	12.8%	25.4%

Statewide

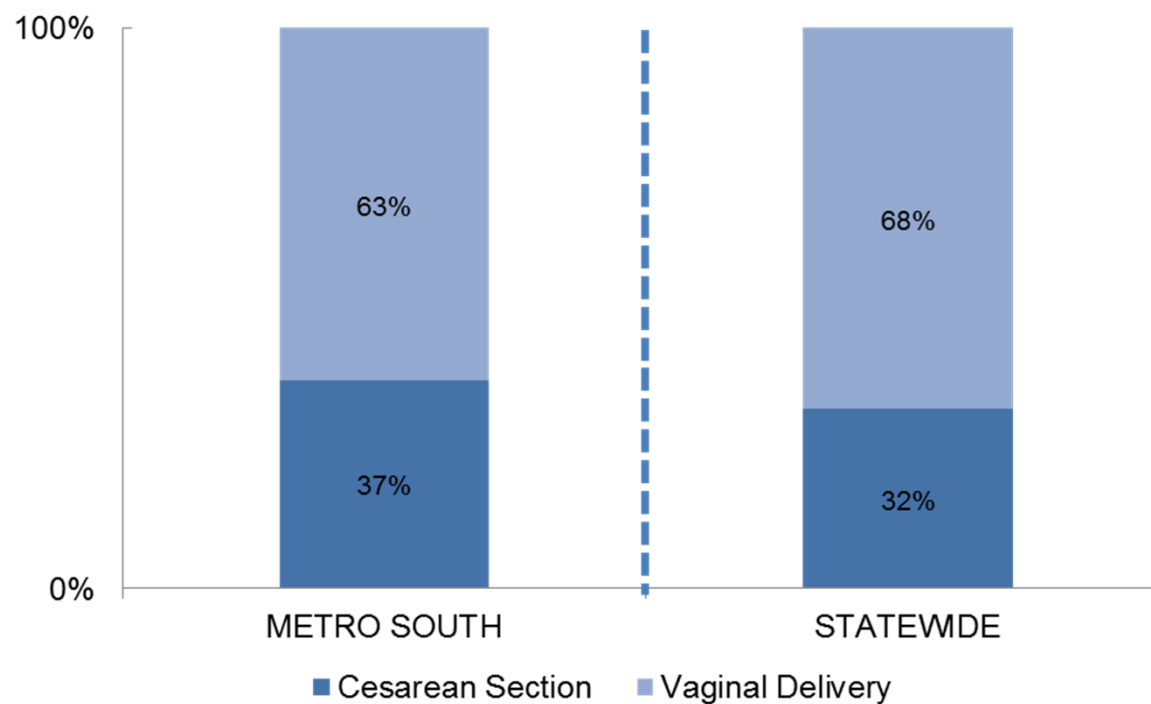


	CommCare	Medicare	Medicaid	Commercial
■ Maternity	7.3%	0.3%	19.3%	17.3%
■ Medical	48.7%	71.1%	38.4%	33.7%
■ Mental Health	4.3%	4.7%	6.7%	4.4%
■ Newborn	4.7%	0.0%	19.5%	16.9%
■ Other Inpatient Category*	0.3%	0.7%	0.2%	0.3%
■ Substance Abuse	5.5%	1.1%	3.7%	2.6%
■ Surgical	29.2%	22.2%	12.2%	24.9%

*Other Inpatient Category includes discharges that do not fall into one of the other major categories. Discharges in this category include procedures such as bone marrow transplants.

Notes: The payer type is derived using the primary payer information reported by the hospital at the time of patient discharge and may change upon payment by the insurer or payer. Trends in total discharges by payer type may be the result of changes in the number of members enrolled in each payer type category. CommCare utilization may also include discharges for members covered by the CommCare Bridge program.

Percentage of Inpatient Delivery Discharges by Method of Delivery (Metro South vs. Statewide FY2012)



Top 10 MS-DRGs by Number of Inpatient Discharges (FY2012) for Metro South

MS-DRG	Title	Discharges	Average Charges	ALOS	% of Regional Discharges	Statewide % Comparison
795	Normal newborn	5,461	\$3,191	2.7	5.0%	5.9%
775	Vaginal delivery w/o complicating diagnoses	4,235	\$9,973	2.6	3.9%	4.9%
392	Esophagitis, gastroent & misc digest disorders w/o MCC	3,624	\$10,617	2.8	3.3%	2.7%
470	Major joint replacement or reattachment of lower extremity w/o MCC	3,158	\$31,958	3.3	2.9%	2.8%
885	Psychoses	2,473	\$16,791	10.1	2.3%	3.8%
794	Neonate w other significant problems	2,012	\$4,480	3.0	1.9%	2.1%
897	Alcohol/drug abuse or dependence w/o rehabilitation therapy w/o MCC	1,978	\$7,232	4.4	1.8%	1.4%
603	Cellulitis w/o MCC	1,960	\$8,530	3.2	1.8%	1.6%
766	Cesarean section w/o CC/MCC	1,875	\$12,981	4.1	1.7%	1.7%
871	Septicemia or severe sepsis w/o MV 96+ hours w MCC	1,516	\$24,510	6.5	1.4%	1.6%

Top 10 Principal Diagnosis Codes by Number of Emergency Department Discharges (FY2012) for Metro South

ICD-9 Diagnosis Code	Title	Discharges	Average Charges	% of Regional Discharges	Statewide % Comparison
789	Other symptoms involving abdomen and pelvis	13,681	\$3,002	4.6%	5.0%
780	General symptoms	11,777	\$1,971	3.9%	4.5%
786	Symptoms involving respiratory system and other chest symptoms	11,569	\$2,192	3.9%	4.4%
724	Other and unspecified disorders of back	8,949	\$1,207	3.0%	3.0%
847	Sprains and strains of other and unspecified parts of back	8,706	\$1,221	2.9%	2.2%
959	Injury, other and unspecified	7,767	\$1,991	2.6%	2.5%
784	Symptoms involving head and neck	7,465	\$1,960	2.5%	2.5%
682	Other cellulitis and abscess	6,801	\$1,157	2.3%	2.4%
873	Other open wound of head	5,747	\$1,482	1.9%	2.0%
719	Other and unspecified disorders of joint	5,421	\$1,166	1.8%	1.7%

Top 10 Principal Diagnosis Codes by Number of Observation Stay Discharges (FY2012) for Metro South

ICD-9 Diagnosis Code	Title	Discharges	Average Charges	% of Regional Discharges	Statewide % Comparison
786	Symptoms involving respiratory system and other chest symptoms	5,169	\$8,727	23.7%	21.8%
780	General symptoms	1,818	\$8,711	8.4%	7.9%
789	Other symptoms involving abdomen and pelvis	808	\$9,294	3.7%	3.1%
427	Cardiac dysrhythmias	448	\$21,239	2.1%	2.3%
276	Disorders of fluid, electrolyte, and acid-base balance	417	\$7,120	1.9%	2.1%
644	Early or threatened labor	338	\$2,147	1.6%	2.4%
474	Chronic disease of tonsils and adenoids	310	\$8,171	1.4%	1.1%
648	Other current conditions in the mother classifiable elsewhere, but complicating pregnancy, childbirth	306	\$3,980	1.4%	1.3%
787	Symptoms involving digestive system	300	\$7,942	1.4%	1.3%
724	Other and unspecified disorders of back	299	\$9,471	1.4%	1.1%

ACUTE CARE HOSPITAL UTILIZATION TRENDS IN MASSACHUSETTS FY2009- 2012

MASSACHUSETTS RESIDENTS

METRO WEST



Introduction

The Center for Health Information and Analysis (CHIA) is publishing these inpatient, emergency department, and observation stay utilization statistics of Massachusetts residents who have been discharged from Massachusetts acute care hospitals for the period beginning in Hospital Fiscal Year (FY) 2009 through 2012. In addition to a statewide report, 8 regional analyses were conducted based on combined Hospital Service Areas.

Each report includes demographic information for the region based on data from the American Community Survey. Differences in utilization may be driven by regional demographics such as age, race, ethnicity, and income.

These charts and tables can be used in conjunction with the associated data books. CHIA will monitor trends outlined in this report and update with additional years of data as it becomes available.

This analysis was produced using CHIA's Acute Hospital Case Mix Databases which are comprised of patient level discharge data submitted by Massachusetts acute hospitals prior to payment by a public payer or private insurer.

To learn more about the data and process used in the development of this report, please see the technical appendix.

REGIONAL REPORTING

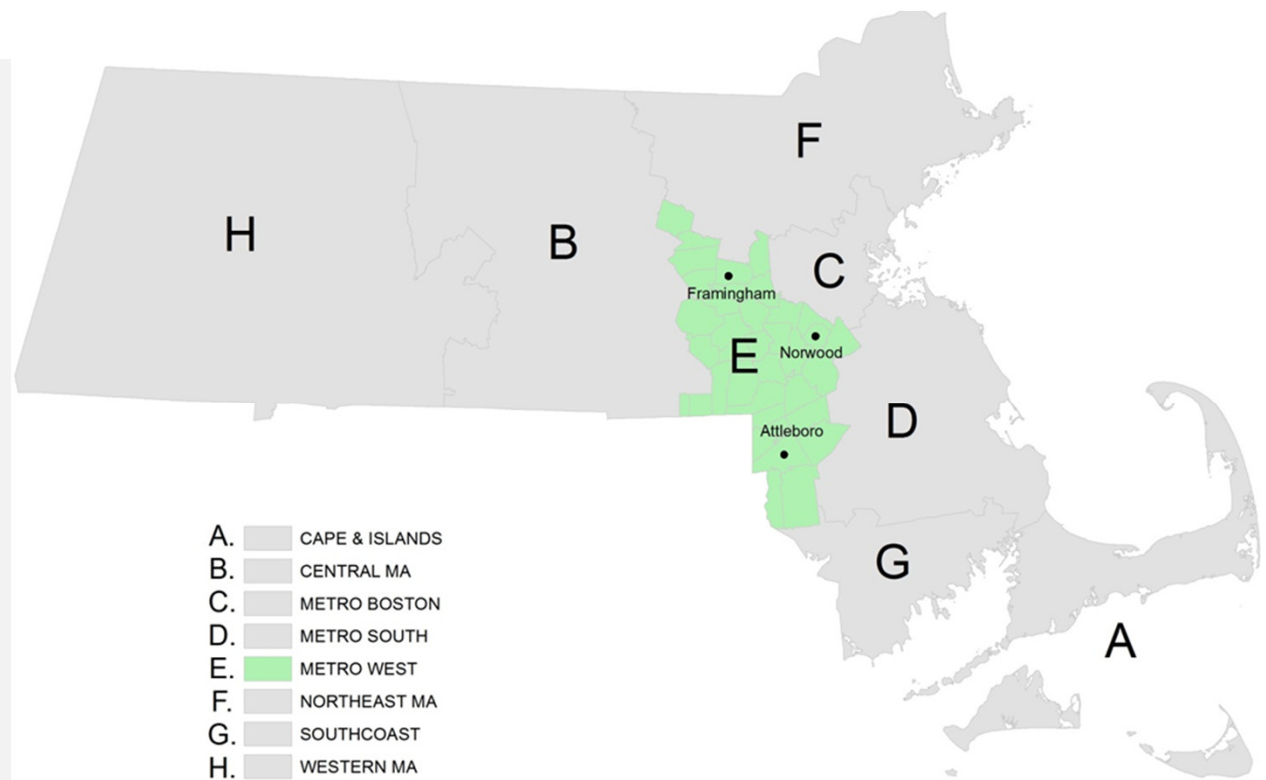
METRO WEST



Metro West

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- [Population at a Glance](#)
- [Acute Hospital Utilization Trends](#)
 - [Acute Hospital Discharges by Payer Type](#)
 - [Discharges by Demographic Information](#)
 - [Inpatient Discharges by Inpatient Service Categories](#)
 - [Percentage of Inpatient Delivery Discharges by Method of Delivery](#)
 - [Top 10 MS-DRG by Number of Inpatient Discharges](#)
 - [Top 10 Principal Diagnosis Codes by Number of Emergency Department Discharges](#)
 - [Top 10 Principal Diagnosis Codes by Number of Observation Stay Discharges](#)



Key Findings for Metro West*

Regional Demographics

- Metro West had the lowest poverty level at 5.4% compared to 10.6% statewide, and the highest mean household income at \$109,717 compared to \$89,965 statewide.
- Metro West had a higher percentage of individuals identified as White at 88.5% compared to 81.0% statewide. In Metro West, 4.6% of individuals identified as Hispanic or Latino compared to 9.6% of individuals statewide.

Acute Hospital Utilization

- Metro West had more inpatient, emergency department and observation stay discharges covered by Commercial insurance compared to statewide. The percentage of discharges covered by Medicaid was lower than statewide, while the percentage of discharges covered by Medicare was similar.
- The percentage of Medicaid inpatient discharges for Substance Abuse services was higher in Metro West at 5.2% compared to 3.7% statewide.
- Metro West had a higher percentage of Cesarean section delivery discharges at 35.0% compared to the statewide percentage of 31.9%.

*All key findings are based on 2012 data unless otherwise indicated.

Notes: The payer type is derived using the primary payer information reported by the hospital at the time of patient discharge and may change upon payment by the insurer or payer.

Population at a Glance for Metro West



Demographics*		Metro West	Statewide
Total Population		656,850 (10.0% of the statewide population)	6,560,595
Gender			
	<i>Male</i>	49.3%	48.4%
	<i>Female</i>	50.7%	51.6%
Age			
	<i>0-19</i>	26.9%	24.7%
	<i>20-44</i>	30.5%	33.8%
	<i>45-64</i>	29.8%	27.7%
	<i>65-84</i>	10.9%	11.7%
	<i>85+</i>	1.9%	2.2%
Race			
	<i>White</i>	88.5%	81.0%
	<i>Black/African American</i>	3.0%	6.8%
	<i>Asian</i>	4.6%	5.4%
	<i>Other**</i>	2.1%	4.2%
	<i>Two or More Races</i>	1.9%	2.6%
Ethnicity			
	<i>Hispanic or Latino</i>	4.6%	9.6%
Income			
	<i>Mean Household Income</i>	\$109,717	\$89,965
	<i>Below Poverty Level</i>	5.4%	10.6%

*Source: American Community Survey 5-year Estimate (2008-2012) U.S. Department of Commerce United States Census Bureau <http://factfinder2.census.gov>

**Includes Native and Pacific Islander and American Indian/Alaskan Native

Acute Hospital Utilization Trends (FY2009-2012) for Metro West

Discharges

	Discharges				Regional % Change		Statewide % Change	
	2009	2010	2011	2012	2011-2012	2009-2012	2011-2012	2009-2012
Inpatient Discharges	67,438	69,498	70,521	67,442	-4.4%	0.0%	-2.9%	-3.0%
Emergency Department Discharges	199,216	194,325	197,085	198,804	0.9%	-0.2%	1.6%	0.7%
Observation Stay Discharges	15,113	15,500	15,454	16,461	6.5%	8.9%	12.2%	20.3%
Total	281,767	279,323	283,060	282,707	-0.1%	0.3%	1.0%	0.7%

Regional Discharges as a Percentage of Statewide Discharges*

	2009	2010	2011	2012
% of Statewide Inpatient Discharges	8.4%	8.6%	8.8%	8.6%
% of Statewide Emergency Department Discharges	8.3%	8.1%	8.3%	8.2%
% of Statewide Observation Stay Discharges	10.1%	9.9%	9.6%	9.1%
% of Statewide Total Combined Discharges	8.4%	8.3%	8.4%	8.4%

*This region's population represents 10.0% of the statewide population.

Discharge Trends by Payer Type (FY2009-2012) for Metro West

Inpatient Discharges

	Discharges				Regional % Change		Statewide % Change	
	2009	2010	2011	2012	2011-2012	2009-2012	2011-2012	2009-2012
CommCare	671	943	1,141	1,101	-3.5%	64.1%	0.9%	28.0%
Commercial	30,221	30,550	30,005	27,841	-7.2%	-7.9%	-4.5%	-10.9%
Medicaid	6,809	6,824	7,510	7,735	3.0%	13.6%	1.8%	4.3%
Medicare	27,697	29,024	29,786	28,547	-4.2%	3.1%	-4.1%	-0.7%
Other Payers*	2,040	2,157	2,079	2,218	6.7%	8.7%	0.4%	2.8%
Total	67,438	69,498	70,521	67,442	-4.4%	0.0%	-2.9%	-3.0%

Emergency Department Discharges

	Discharges				Regional % Change		Statewide % Change	
	2009	2010	2011	2012	2011-2012	2009-2012	2011-2012	2009-2012
CommCare	4,135	5,007	6,163	6,261	1.6%	51.4%	-0.9%	31.1%
Commercial	101,037	94,242	92,603	87,730	-5.3%	-13.2%	-5.1%	-14.6%
Medicaid	38,774	39,191	40,910	45,832	12.0%	18.2%	9.3%	13.4%
Medicare	30,169	31,028	32,847	34,653	5.5%	14.9%	4.8%	13.7%
Other Payers*	25,101	24,857	24,562	24,328	-1.0%	-3.1%	-0.3%	-1.7%
Total	199,216	194,325	197,085	198,804	0.9%	-0.2%	1.6%	0.7%

Observation Stay Discharges

	Discharges				Regional % Change		Statewide % Change	
	2009	2010	2011	2012	2011-2012	2009-2012	2011-2012	2009-2012
CommCare	222	334	298	388	30.2%	74.8%	23.9%	65.5%
Commercial	7,586	7,821	7,437	7,219	-2.9%	-4.8%	3.1%	-0.1%
Medicaid	1,480	1,595	1,760	1,931	9.7%	30.5%	8.7%	25.4%
Medicare	5,236	5,129	5,344	6,237	16.7%	19.1%	24.6%	42.7%
Other Payers*	589	621	615	686	11.5%	16.5%	8.4%	21.6%
Total	15,113	15,500	15,454	16,461	6.5%	8.9%	12.2%	20.3%

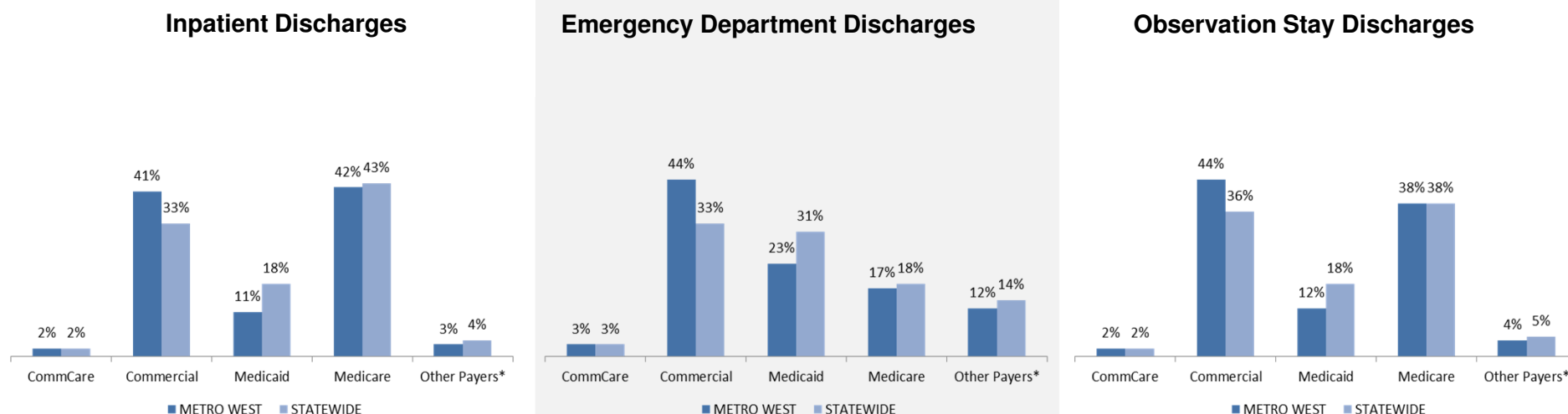
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Notes: The payer type is derived using the primary payer information reported by the hospital at the time of patient discharge and may change upon payment by the insurer or payer. CommCare utilization may also include discharges for members covered by the CommCare Bridge program.

Please note:
Trends in total discharges by payer type may be the result of changes in the number of members enrolled in each payer type category.

Percentage of Discharges by Payer Type (FY2012) for Metro West

The payer type is derived using the primary payer information reported by the hospital at the time of patient discharge and may change upon payment by the insurer or payer. Trends in total discharges by payer type may be the result of changes in the number of members enrolled in each payer type category. CommCare utilization may also include discharges for members covered by the CommCare Bridge program.



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Discharges by Demographic Information (Metro West vs. Statewide FY2012)

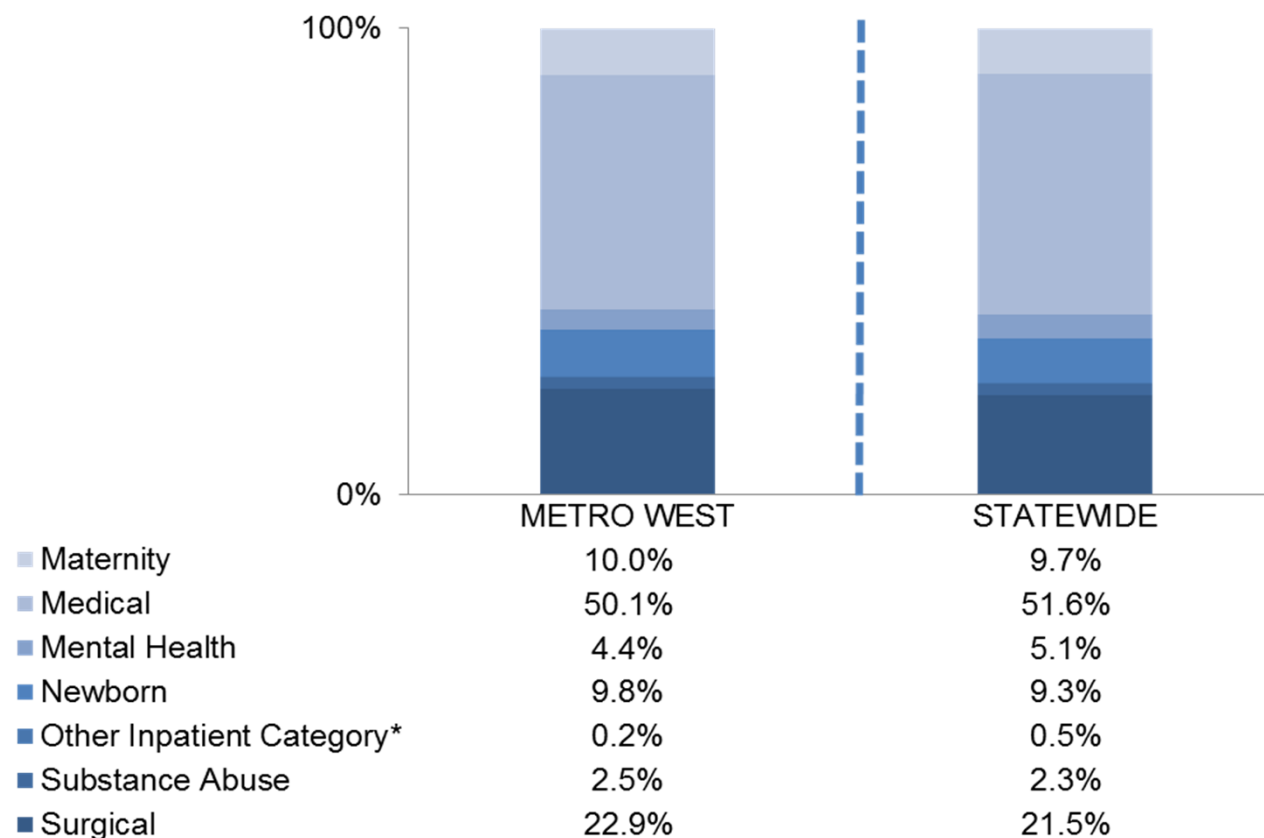
Age

	Inpatient Discharges			Emergency Department Discharges			Observation Stay Discharges		
	Regional		Statewide Comparison	Regional		Statewide Comparison	Regional		Statewide Comparison
Age (years)	#	%	%	#	%	%	#	%	%
0-19	9,991	14.8%	14.6%	48,810	24.6%	22.8%	1,698	10.3%	9.9%
20-44	14,473	21.5%	22.6%	75,306	37.9%	41.6%	3,066	18.6%	23.4%
45-64	16,585	24.6%	25.0%	47,927	24.1%	23.4%	5,569	33.8%	32.1%
65-84	19,027	28.2%	27.3%	20,547	10.3%	9.6%	4,580	27.8%	25.5%
85+	7,366	10.9%	10.4%	6,214	3.1%	2.8%	1,548	9.4%	9.0%

Race and Hispanic or Latino Ethnicity

	Inpatient Discharges			Emergency Department Discharges			Observation Stay Discharges		
	Regional		Statewide Comparison	Regional		Statewide Comparison	Regional		Statewide Comparison
Race	#	%	%	#	%	%	#	%	%
Asian	1,811	2.7%	2.8%	3,225	1.6%	2.0%	255	1.5%	2.0%
Black/African American	1,928	2.9%	7.6%	9,276	4.7%	11.4%	515	3.1%	9.8%
Other Races	2,600	3.9%	5.9%	16,965	8.5%	10.8%	782	4.8%	6.9%
Unknown/not specified	1,591	2.4%	4.9%	3,047	1.5%	4.0%	361	2.2%	4.1%
White	59,512	88.2%	78.9%	166,291	83.6%	71.9%	14,548	88.4%	77.1%
Ethnicity									
Hispanic or Latino	2,552	3.8%	8.2%	14,779	7.4%	15.0%	689	4.2%	9.7%

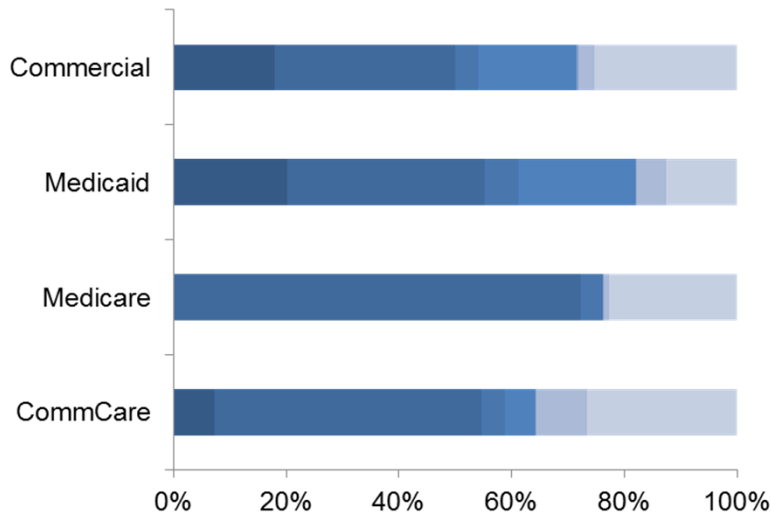
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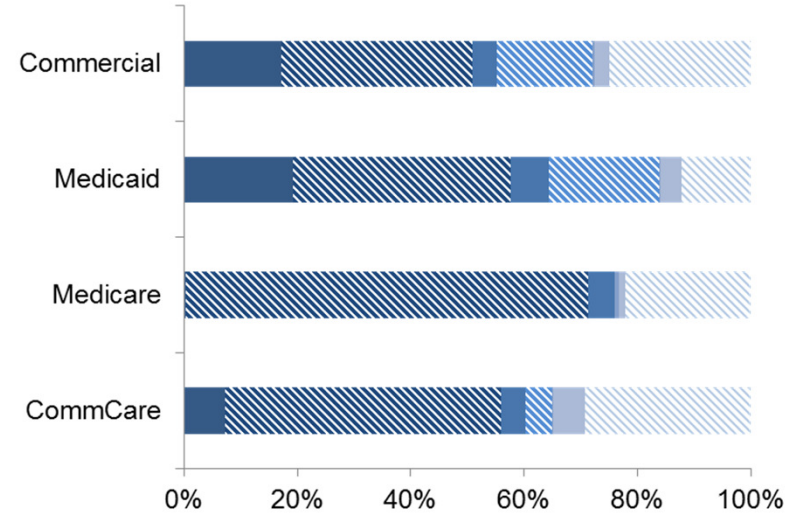
Percentage of Inpatient Discharges by Payer Type and Service Category (Metro West vs. Statewide FY2012)

Metro West



	CommCare	Medicare	Medicaid	Commercial
■ Maternity	7.3%	0.2%	20.2%	17.9%
■ Medical	47.4%	72.0%	35.0%	32.1%
■ Mental Health	4.0%	4.0%	6.0%	4.0%
■ Newborn	5.5%	0.0%	20.8%	17.5%
■ Other Inpatient Category*	0.2%	0.2%	0.1%	0.2%
■ Substance Abuse	9.0%	1.0%	5.2%	2.8%
■ Surgical	26.6%	22.6%	12.7%	25.4%

Statewide

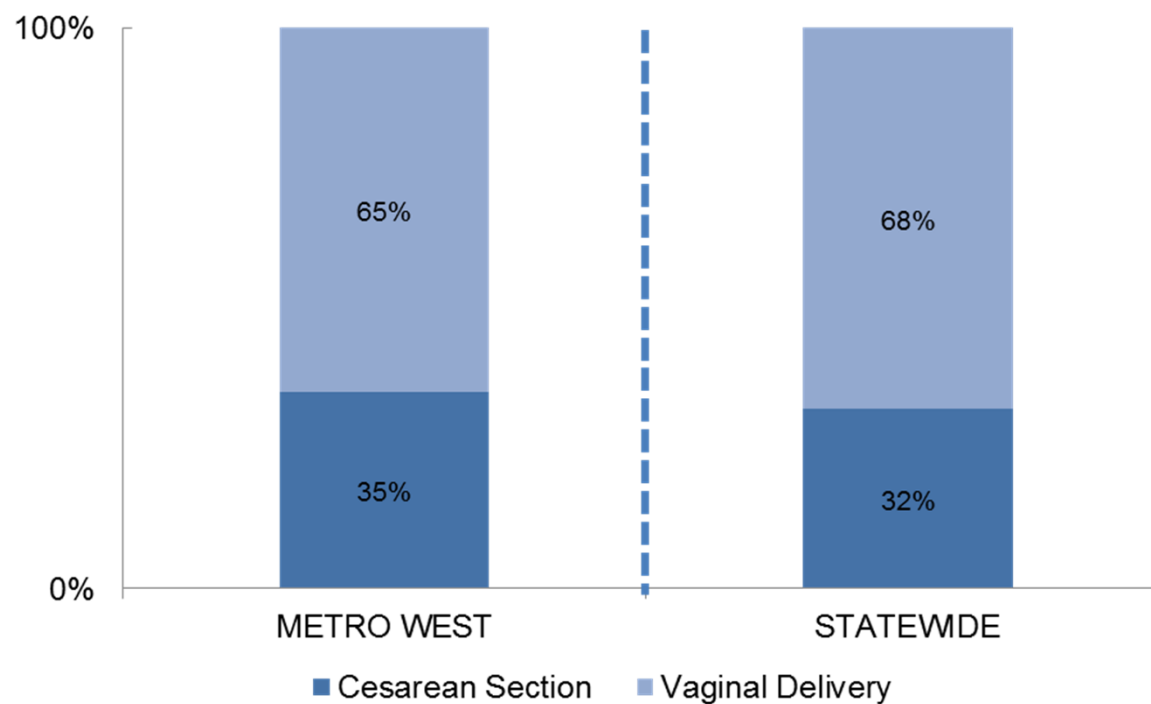


	CommCare	Medicare	Medicaid	Commercial
■ Maternity	7.3%	0.3%	19.3%	17.3%
■ Medical	48.7%	71.1%	38.4%	33.7%
■ Mental Health	4.3%	4.7%	6.7%	4.4%
■ Newborn	4.7%	0.0%	19.5%	16.9%
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Percentage of Inpatient Delivery Discharges by Method of Delivery (Metro West vs. Statewide FY2012)



Top 10 MS-DRGs by Number of Inpatient Discharges (FY2012) for Metro West

MS-DRG	Title	Discharges	Average Charges	ALOS	% of Regional Discharges	Statewide % Comparison
795	Normal newborn	4,111	\$3,547	2.6	6.1%	5.9%
775	Vaginal delivery w/o complicating diagnoses	3,382	\$11,706	2.4	5.0%	4.9%
885	Psychoses	2,278	\$18,102	9.5	3.4%	3.8%
470	Major joint replacement or reattachment of lower extremity w/o MCC	2,207	\$34,902	3.3	3.3%	2.8%
392	Esophagitis, gastroent & misc digest disorders w/o MCC	2,005	\$11,094	2.9	3.0%	2.7%
794	Neonate w other significant problems	1,601	\$4,419	2.9	2.4%	2.1%
766	Cesarean section w/o CC/MCC	1,416	\$15,979	4.1	2.1%	1.7%
897	Alcohol/drug abuse or dependence w/o rehabilitation therapy w/o MCC	1,248	\$7,722	4.3	1.9%	1.4%
871	Septicemia or severe sepsis w/o MV 96+ hours w MCC	973	\$27,351	5.9	1.4%	1.6%
603	Cellulitis w/o MCC	951	\$9,757	3.3	1.4%	1.6%

Top 10 Principal Diagnosis Codes by Number of Emergency Department Discharges (FY2012) for Metro West

ICD-9 Diagnosis Code	Title	Discharges	Average Charges	% of Regional Discharges	Statewide % Comparison
789	Other symptoms involving abdomen and pelvis	9,490	\$3,277	4.8%	5.0%
780	General symptoms	8,503	\$2,030	4.3%	4.5%
786	Symptoms involving respiratory system and other chest symptoms	8,419	\$2,210	4.2%	4.4%
682	Other cellulitis and abscess	6,243	\$1,153	3.1%	2.4%
724	Other and unspecified disorders of back	6,074	\$1,416	3.1%	3.0%
959	Injury, other and unspecified	5,103	\$1,800	2.6%	2.5%
784	Symptoms involving head and neck	4,814	\$2,055	2.4%	2.5%
787	Symptoms involving digestive system	4,592	\$1,833	2.3%	2.1%
873	Other open wound of head	4,521	\$1,435	2.3%	2.0%
883	Open wound of finger(s)	3,698	\$980	1.9%	1.5%

Top 10 Principal Diagnosis Codes by Number of Observation Stay Discharges (FY2012) for Metro West

ICD-9 Diagnosis Code	Title	Discharges	Average Charges	% of Regional Discharges	Statewide % Comparison
786	Symptoms involving respiratory system and other chest symptoms	3,212	\$7,262	19.5%	21.8%
780	General symptoms	1,263	\$8,143	7.7%	7.9%
427	Cardiac dysrhythmias	554	\$17,070	3.4%	2.3%
789	Other symptoms involving abdomen and pelvis	481	\$8,808	2.9%	3.1%
414	Other forms of chronic ischemic heart disease	359	\$26,599	2.2%	1.3%
474	Chronic disease of tonsils and adenoids	353	\$7,027	2.1%	1.1%
276	Disorders of fluid, electrolyte, and acid-base balance	312	\$7,143	1.9%	2.1%
540	Acute appendicitis	222	\$16,306	1.3%	0.9%
574	Cholelithiasis	189	\$13,268	1.1%	0.7%
784	Symptoms involving head and neck	174	\$10,211	1.1%	1.0%

ACUTE CARE HOSPITAL UTILIZATION TRENDS IN MASSACHUSETTS FY2009- 2012

MASSACHUSETTS RESIDENTS

NORTHEAST MA



Introduction

The Center for Health Information and Analysis (CHIA) is publishing these inpatient, emergency department, and observation stay utilization statistics of Massachusetts residents who have been discharged from Massachusetts acute care hospitals for the period beginning in Hospital Fiscal Year (FY) 2009 through 2012. In addition to a statewide report, 8 regional analyses were conducted based on combined Hospital Service Areas.

Each report includes demographic information for the region based on data from the American Community Survey. Differences in utilization may be driven by regional demographics such as age, race, ethnicity, and income.

These charts and tables can be used in conjunction with the associated data books. CHIA will monitor trends outlined in this report and update with additional years of data as it becomes available.

This analysis was produced using CHIA's Acute Hospital Case Mix Databases which are comprised of patient level discharge data submitted by Massachusetts acute hospitals prior to payment by a public payer or private insurer.

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REGIONAL REPORTING

NORTHEAST MA

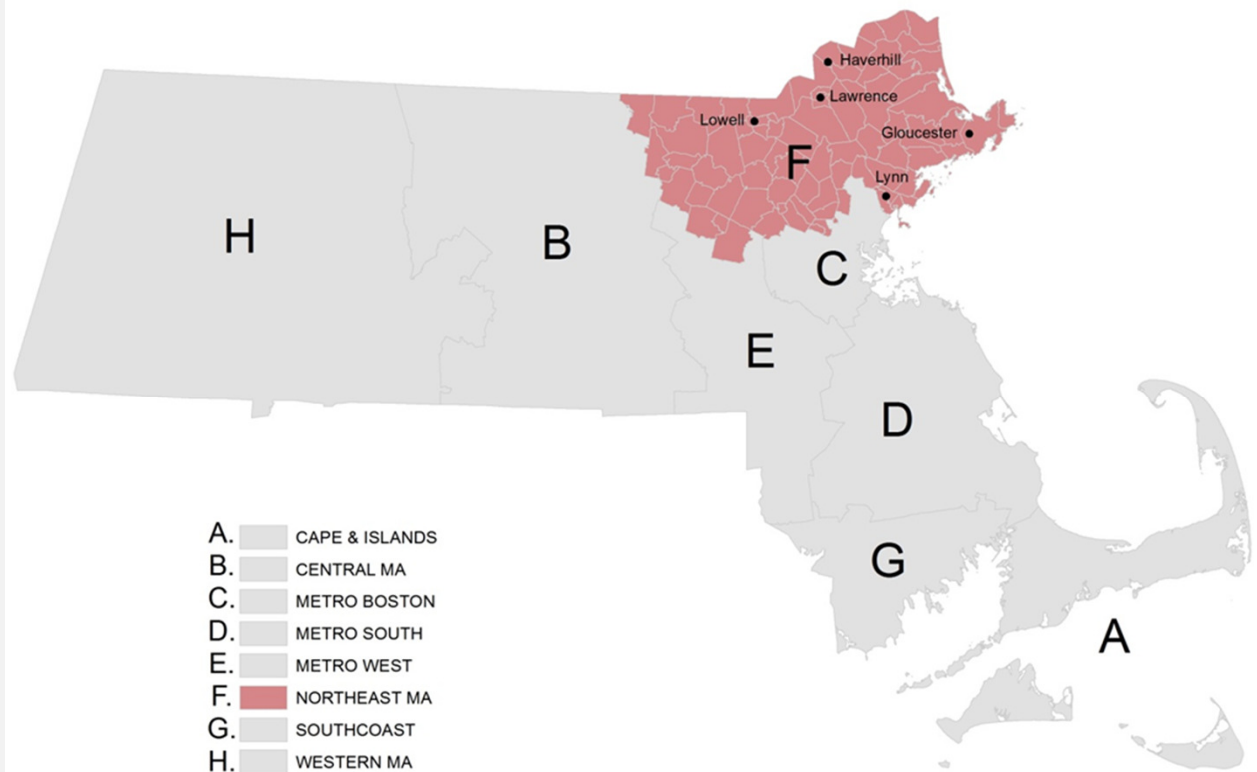


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Northeast MA

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Key Findings for Northeast MA*

Regional Demographics

- Northeast MA represented the second largest region with 21.4% of the statewide population.
- Northeast MA had a higher percentage of individuals identified as Hispanic or Latino (11.2%), Asian (6.1%) and Other Races (6.4%) than statewide.
- Northeast MA had the second highest regional mean household income at \$101,085 compared to \$89,965 statewide, and had a lower percentage of residents below the poverty level at 8.6% compared to 10.6% statewide.

Acute Hospital Utilization

- Northeast MA's Medicaid inpatient, emergency department and observation stay discharges increased at higher rates compared to statewide increases in Medicaid discharges between 2011 and 2012. Please note: Trends in total discharges by payer type may be the result of changes in the number of members enrolled in each payer type category.
- Northeast MA's emergency department discharges had a higher percentage increase between 2009 and 2012 at 7.3% compared to statewide at 0.7% during the same time period.

*All key findings are based on 2012 data unless otherwise indicated.

Notes: The payer type is derived using the primary payer information reported by the hospital at the time of patient discharge and may change upon payment by the insurer or payer.

Population at a Glance for Northeast MA



Demographics*		Northeast MA	Statewide
Total Population		1,400,816 (21.4% of the statewide population)	6,560,595
Gender			
	<i>Male</i>	48.6%	48.4%
	<i>Female</i>	51.4%	51.6%
Age			
	<i>0-19</i>	26.1%	24.7%
	<i>20-44</i>	30.7%	33.8%
	<i>45-64</i>	29.3%	27.7%
	<i>65-84</i>	11.7%	11.7%
	<i>85+</i>	2.2%	2.2%
Race			
	<i>White</i>	82.2%	81.0%
	<i>Black/African American</i>	3.1%	6.8%
	<i>Asian</i>	6.1%	5.4%
	<i>Other**</i>	6.4%	4.2%
	<i>Two or More Races</i>	2.1%	2.6%
Ethnicity			
	<i>Hispanic or Latino</i>	11.2%	9.6%
Income			
	<i>Mean Household Income</i>	\$101,085	\$89,965
	<i>Below Poverty Level</i>	8.6%	10.6%

*Source: American Community Survey 5-year Estimate (2008-2012) U.S. Department of Commerce United States Census Bureau <http://factfinder2.census.gov>

**Includes Native and Pacific Islander and American Indian/Alaskan Native

Acute Hospital Utilization Trends (FY2009-2012) for Northeast MA

Discharges

	Discharges				Regional % Change		Statewide % Change	
	2009	2010	2011	2012	2011-2012	2009-2012	2011-2012	2009-2012
Inpatient Discharges	167,434	171,025	170,703	167,720	-1.7%	0.2%	-2.9%	-3.0%
Emergency Department Discharges	432,231	464,456	456,572	463,904	1.6%	7.3%	1.6%	0.7%
Observation Stay Discharges	29,372	30,048	29,610	35,293	19.2%	20.2%	12.2%	20.3%
Total	629,037	665,529	656,885	666,917	1.5%	6.0%	1.0%	0.7%

Regional Discharges as a Percentage of Statewide Discharges*

	2009	2010	2011	2012
% of Statewide Inpatient Discharges	20.8%	21.3%	21.2%	21.5%
% of Statewide Emergency Department Discharges	18.0%	19.4%	19.2%	19.1%
% of Statewide Observation Stay Discharges	19.6%	19.1%	18.4%	19.5%
% of Statewide Total Combined Discharges	18.7%	19.8%	19.6%	19.7%

*This region's population represents 21.4% of the statewide population.

Discharge Trends by Payer Type (FY2009-2012) for Northeast MA

Inpatient Discharges

	Discharges				Regional % Change		Statewide % Change	
	2009	2010	2011	2012	2011-2012	2009-2012	2011-2012	2009-2012
CommCare	2,177	2,624	2,927	2,651	-9.4%	21.8%	0.9%	28.0%
Commercial	66,089	66,819	62,877	59,920	-4.7%	-9.3%	-4.5%	-10.9%
Medicaid	24,154	24,395	25,225	27,963	10.9%	15.8%	1.8%	4.3%
Medicare	69,016	71,288	73,500	70,615	-3.9%	2.3%	-4.1%	-0.7%
Other Payers*	5,998	5,899	6,174	6,571	6.4%	9.6%	0.4%	2.8%
Total	167,434	171,025	170,703	167,720	-1.7%	0.2%	-2.9%	-3.0%

Emergency Department Discharges

	Discharges				Regional % Change		Statewide % Change	
	2009	2010	2011	2012	2011-2012	2009-2012	2011-2012	2009-2012
CommCare	10,854	12,198	13,939	13,836	-0.7%	27.5%	-0.9%	31.1%
Commercial	189,108	198,124	187,318	171,844	-8.3%	-9.1%	-5.1%	-14.6%
Medicaid	104,501	113,612	113,204	132,258	16.8%	26.6%	9.3%	13.4%
Medicare	69,245	77,379	79,937	83,292	4.2%	20.3%	4.8%	13.7%
Other Payers*	58,523	63,143	62,174	62,674	0.8%	7.1%	-0.3%	-1.7%
Total	432,231	464,456	456,572	463,904	1.6%	7.3%	1.6%	0.7%

Observation Stay Discharges

	Discharges				Regional % Change		Statewide % Change	
	2009	2010	2011	2012	2011-2012	2009-2012	2011-2012	2009-2012
CommCare	393	643	508	731	43.9%	86.0%	23.9%	65.5%
Commercial	14,968	15,158	14,016	14,883	6.2%	-0.6%	3.1%	-0.1%
Medicaid	4,642	4,521	4,488	5,625	25.3%	21.2%	8.7%	25.4%
Medicare	8,110	8,455	9,272	12,528	35.1%	54.5%	24.6%	42.7%
Other Payers*	1,259	1,271	1,326	1,526	15.1%	21.2%	8.4%	21.6%
Total	29,372	30,048	29,610	35,293	19.2%	20.2%	12.2%	20.3%

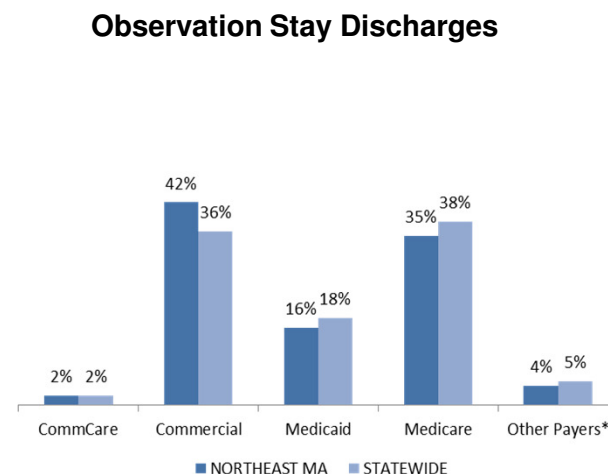
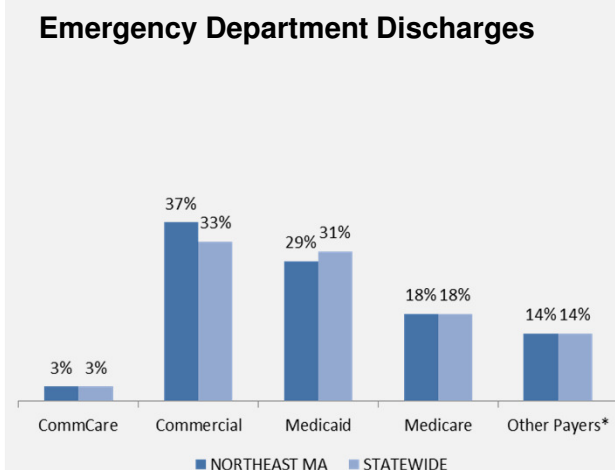
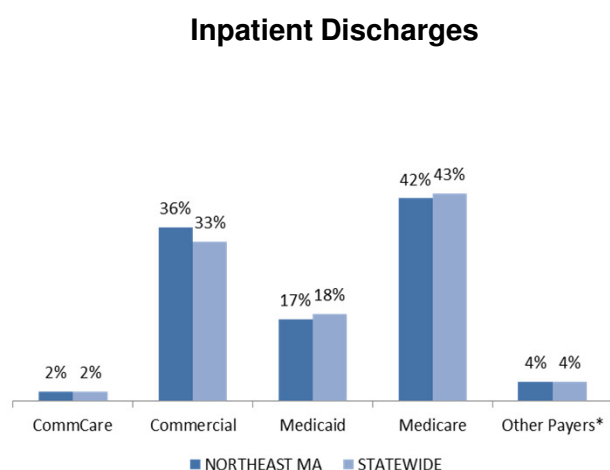
*Other payers include automobile insurance, Health Safety Net, self-pay, workman's compensation and discharges missing payer information.

Notes: The payer type is derived using the primary payer information reported by the hospital at the time of patient discharge and may change upon payment by the insurer or payer. CommCare utilization may also include discharges for members covered by the CommCare Bridge program.

Please note:
Trends in total discharges by payer type may be the result of changes in the number of members enrolled in each payer type category.

Percentage of Discharges by Payer Type (FY2012) for Northeast MA

The payer type is derived using the primary payer information reported by the hospital at the time of patient discharge and may change upon payment by the insurer or payer. Trends in total discharges by payer type may be the result of changes in the number of members enrolled in each payer type category. CommCare utilization may also include discharges for members covered by the CommCare Bridge program.



*Other payers include automobile insurance, Health Safety Net, self-pay, workman's compensation and discharges missing payer information.

Discharges by Demographic Information (Northeast MA vs. Statewide FY2012)

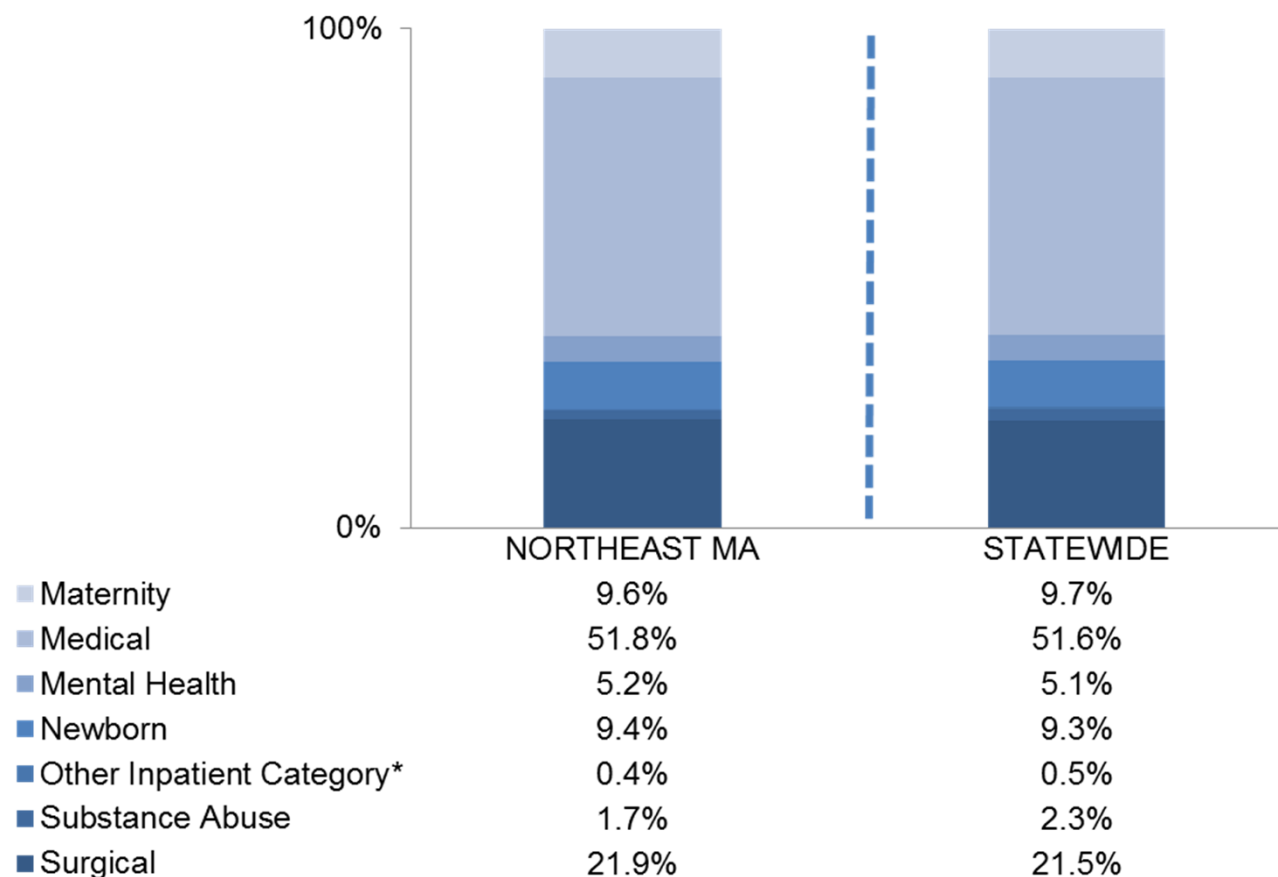
Age

	Inpatient Discharges			Emergency Department Discharges			Observation Stay Discharges		
	Regional		Statewide Comparison	Regional		Statewide Comparison	Regional		Statewide Comparison
Age (years)	#	%	%	#	%	%	#	%	%
0-19	26,111	15.6%	14.6%	113,610	24.5%	22.8%	3,857	10.9%	9.9%
20-44	35,947	21.4%	22.6%	181,324	39.1%	41.6%	8,824	25.0%	23.4%
45-64	40,999	24.4%	25.0%	107,982	23.3%	23.4%	10,695	30.3%	32.1%
65-84	46,325	27.6%	27.3%	47,202	10.2%	9.6%	8,823	25.0%	25.5%
85+	18,338	10.9%	10.4%	13,786	3.0%	2.8%	3,094	8.8%	9.0%

Race and Hispanic or Latino Ethnicity

	Inpatient Discharges			Emergency Department Discharges			Observation Stay Discharges		
	Regional		Statewide Comparison	Regional		Statewide Comparison	Regional		Statewide Comparison
Race	#	%	%	#	%	%	#	%	%
Asian	5,796	3.5%	2.8%	12,882	2.8%	2.0%	917	2.6%	2.0%
Black/African American	6,258	3.7%	7.6%	29,985	6.5%	11.4%	1,510	4.3%	9.8%
Other Races	11,235	6.7%	5.9%	57,681	12.4%	10.8%	2,307	6.5%	6.9%
Unknown/not specified	5,912	3.5%	4.9%	10,603	2.3%	4.0%	835	2.4%	4.1%
White	138,519	82.6%	78.9%	352,753	76.0%	71.9%	29,724	84.2%	77.1%
Ethnicity									
Hispanic or Latino	16,376	9.8%	8.2%	93,748	20.2%	15.0%	3,833	10.9%	9.7%

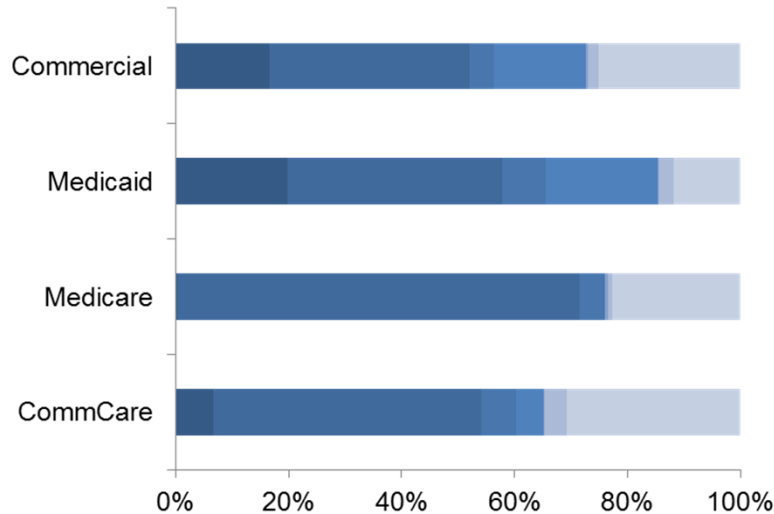
Inpatient Discharges by Inpatient Service Categories (Northeast MA vs. Statewide FY2012)



*Other Inpatient Category includes discharges that do not fall into one of the other major categories. Discharges in this category include procedures such as bone marrow transplants.

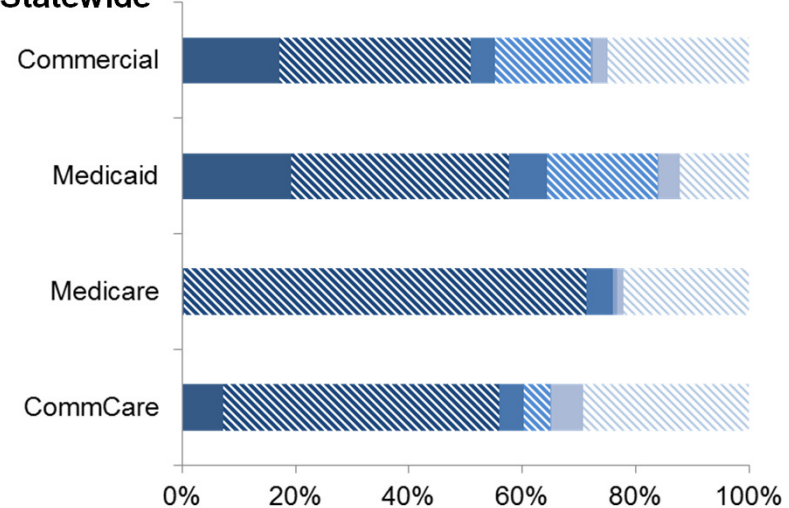
Percentage of Inpatient Discharges by Payer Type and Service Category (Northeast MA vs. Statewide FY2012)

Northeast MA



	CommCare	Medicare	Medicaid	Commercial
■ Maternity	6.7%	0.2%	19.8%	16.6%
■ Medical	47.4%	71.3%	38.0%	35.4%
■ Mental Health	6.2%	4.4%	7.7%	4.2%
■ Newborn	4.9%	0.0%	19.9%	16.4%
■ Other Inpatient Category*	0.2%	0.5%	0.1%	0.4%
■ Substance Abuse	4.0%	0.9%	2.6%	1.8%
■ Surgical	30.7%	22.6%	11.9%	25.2%

Statewide

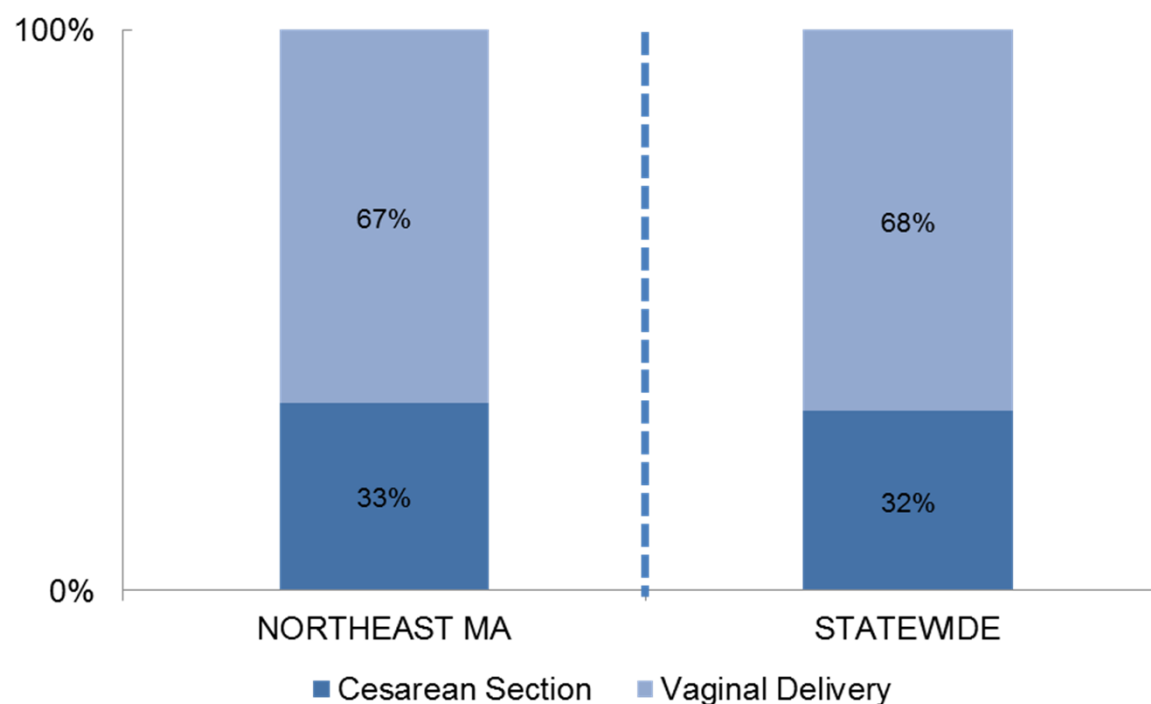


	CommCare	Medicare	Medicaid	Commercial
■ Maternity	7.3%	0.3%	19.3%	17.3%
■ Medical	48.7%	71.1%	38.4%	33.7%
■ Mental Health	4.3%	4.7%	6.7%	4.4%
■ Newborn	4.7%	0.0%	19.5%	16.9%
■ Other Inpatient Category*	0.3%	0.7%	0.2%	0.3%
■ Substance Abuse	5.5%	1.1%	3.7%	2.6%
■ Surgical	29.2%	22.2%	12.2%	24.9%

*Other Inpatient Category includes discharges that do not fall into one of the other major categories. Discharges in this category include procedures such as bone marrow transplants.

Notes: The payer type is derived using the primary payer information reported by the hospital at the time of patient discharge and may change upon payment by the insurer or payer. Trends in total discharges by payer type may be the result of changes in the number of members enrolled in each payer type category. CommCare utilization may also include discharges for members covered by the CommCare Bridge program.

Percentage of Inpatient Delivery Discharges by Method of Delivery (Northeast MA vs. Statewide FY2012)



Top 10 MS-DRGs by Number of Inpatient Discharges (FY2012) for Northeast MA

MS-DRG	Title	Discharges	Average Charges	ALOS	% of Regional Discharges	Statewide % Comparison
795	Normal newborn	9,673	\$3,107	2.5	5.8%	5.9%
775	Vaginal delivery w/o complicating diagnoses	8,019	\$8,263	2.4	4.8%	4.9%
885	Psychoses	6,340	\$16,917	9.9	3.8%	3.8%
470	Major joint replacement or reattachment of lower extremity w/o MCC	5,124	\$31,867	3.4	3.1%	2.8%
392	Esophagitis, gastroent & misc digest disorders w/o MCC	4,483	\$11,026	2.9	2.7%	2.7%
794	Neonate w other significant problems	3,529	\$4,610	3.0	2.1%	2.1%
766	Cesarean section w/o CC/MCC	3,079	\$11,963	4.0	1.8%	1.7%
603	Cellulitis w/o MCC	2,632	\$10,152	3.5	1.6%	1.6%
871	Septicemia or severe sepsis w/o MV 96+ hours w MCC	2,449	\$29,680	6.6	1.5%	1.6%
897	Alcohol/drug abuse or dependence w/o rehabilitation therapy w/o MCC	2,234	\$10,393	4.9	1.3%	1.4%

Top 10 Principal Diagnosis Codes by Number of Emergency Department Discharges (FY2012) for Northeast MA

ICD-9 Diagnosis Code	Title	Discharges	Average Charges	% of Regional Discharges	Statewide % Comparison
789	Other symptoms involving abdomen and pelvis	21,880	\$2,711	4.7%	5.0%
780	General symptoms	20,532	\$1,807	4.4%	4.5%
786	Symptoms involving respiratory system and other chest symptoms	18,456	\$2,073	4.0%	4.4%
959	Injury, other and unspecified	13,230	\$1,811	2.9%	2.5%
724	Other and unspecified disorders of back	12,392	\$1,143	2.7%	3.0%
682	Other cellulitis and abscess	11,625	\$1,067	2.5%	2.4%
784	Symptoms involving head and neck	11,283	\$1,780	2.4%	2.5%
847	Sprains and strains of other and unspecified parts of back	10,362	\$1,188	2.2%	2.2%
787	Symptoms involving digestive system	10,146	\$1,531	2.2%	2.1%
873	Other open wound of head	9,995	\$1,572	2.2%	2.0%

Top 10 Principal Diagnosis Codes by Number of Observation Stay Discharges (FY2012) for Northeast MA

ICD-9 Diagnosis Code	Title	Discharges	Average Charges	% of Regional Discharges	Statewide % Comparison
786	Symptoms involving respiratory system and other chest symptoms	7,737	\$7,986	21.9%	21.8%
780	General symptoms	2,731	\$8,585	7.7%	7.9%
644	Early or threatened labor	1,712	\$2,263	4.9%	2.4%
789	Other symptoms involving abdomen and pelvis	903	\$8,894	2.6%	3.1%
276	Disorders of fluid, electrolyte, and acid-base balance	799	\$6,481	2.3%	2.1%
427	Cardiac dysrhythmias	774	\$21,232	2.2%	2.3%
648	Other current conditions in the mother classifiable elsewhere, but complicating pregnancy, childbirth	670	\$2,848	1.9%	1.3%
414	Other forms of chronic ischemic heart disease	565	\$21,209	1.6%	1.3%
474	Chronic disease of tonsils and adenoids	471	\$7,525	1.3%	1.1%
787	Symptoms involving digestive system	358	\$8,601	1.0%	1.3%

ACUTE CARE HOSPITAL UTILIZATION TRENDS IN MASSACHUSETTS FY2009- 2012

MASSACHUSETTS RESIDENTS

SOUTHCOAST



Introduction

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Each report includes demographic information for the region based on data from the American Community Survey. Differences in utilization may be driven by regional demographics such as age, race, ethnicity, and income.

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REGIONAL REPORTING

SOUTHCOAST

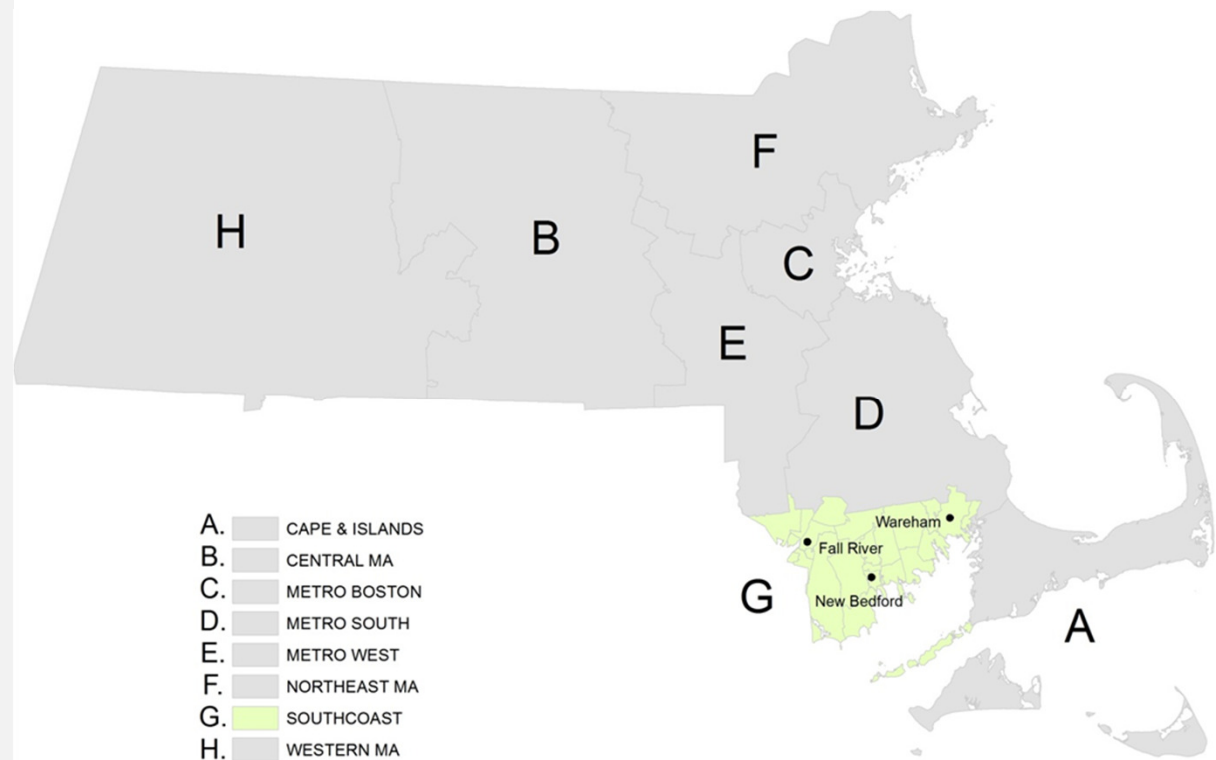


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Southcoast

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Key Findings for the Southcoast*

Regional Demographics

- Southcoast had a higher percentage of individuals identified as White at 88.3% compared to 81.0% statewide. In Southcoast, 7.1% of individuals identified as Hispanic or Latino compared to 9.6% statewide.
- Southcoast had the lowest regional mean household income (\$63,919) and the highest regional percentage of the population below the poverty level at 14.7%.

Acute Hospital Utilization

- Southcoast had an overall increase in inpatient discharges from 2009 to 2012, but there was a 6.7% decrease between 2011 and 2012.
- Observation stay discharges in Southcoast increased by 37.9% from 2011 to 2012 compared to 12.2% statewide in the same time period.
- Southcoast had more emergency department discharges covered by Medicaid (40.2%) and more inpatient discharges covered by Medicare (50.4%) compared to statewide (31.0% and 42.9% respectively). There was a substantial percentage increase of discharges covered by Commcare between 2009 and 2010. Please note: Trends in total discharges by payer type may be the result of changes in the number of members enrolled in each payer type category.
- Southcoast had a higher percentage of Cesarean section delivery discharges at 34.6% compared to the statewide percentage of 31.9%.

*All key findings are based on 2012 data unless otherwise indicated.

Notes: The payer type is derived using the primary payer information reported by the hospital at the time of patient discharge and may change upon payment by the insurer or payer. CommCare utilization may also include discharges for members covered by the CommCare Bridge program.

Population at a Glance for the Southcoast



Demographics*		Southcoast	Statewide
Total Population		339,924 (5.2% of the statewide population)	6,560,595
Gender			
	<i>Male</i>	48.0%	48.4%
	<i>Female</i>	52.0%	51.6%
Age			
	<i>0-19</i>	23.5%	24.7%
	<i>20-44</i>	32.4%	33.8%
	<i>45-64</i>	27.9%	27.7%
	<i>65-84</i>	13.5%	11.7%
	<i>85+</i>	2.9%	2.2%
Race			
	<i>White</i>	88.3%	81.0%
	<i>Black/African American</i>	3.7%	6.8%
	<i>Asian</i>	1.5%	5.4%
	<i>Other**</i>	3.8%	4.2%
	<i>Two or More Races</i>	2.8%	2.6%
Ethnicity			
	<i>Hispanic or Latino</i>	7.1%	9.6%
Income			
	<i>Mean Household Income</i>	\$63,919	\$89,965
	<i>Below Poverty Level</i>	14.7%	10.6%

*Source: American Community Survey 5-year Estimate (2008-2012) U.S. Department of Commerce United States Census Bureau <http://factfinder2.census.gov>

**Includes Native and Pacific Islander and American Indian/Alaskan Native

Acute Hospital Utilization Trends (FY2009-2012) for the Southcoast

Discharges

	Discharges				Regional % Change		Statewide % Change	
	2009	2010	2011	2012	2011-2012	2009-2012	2011-2012	2009-2012
Inpatient Discharges	46,908	49,770	53,737	50,140	-6.7%	6.9%	-2.9%	-3.0%
Emergency Department Discharges	167,873	168,691	166,865	171,909	3.0%	2.4%	1.6%	0.7%
Observation Stay Discharges	7,390	7,333	6,838	9,431	37.9%	27.6%	12.2%	20.3%
Total	222,171	225,794	227,440	231,480	1.8%	4.2%	1.0%	0.7%

Regional Discharges as a Percentage of Statewide Discharges*

	2009	2010	2011	2012
% of Statewide Inpatient Discharges	5.8%	6.2%	6.7%	6.4%
% of Statewide Emergency Department Discharges	7.0%	7.0%	7.0%	7.1%
% of Statewide Observation Stay Discharges	4.9%	4.7%	4.2%	5.2%
% of Statewide Total Combined Discharges	6.6%	6.7%	6.8%	6.8%

*This region's population represents 5.2% of the statewide population.

Discharge Trends by Payer Type (FY2009-2012) for the Southcoast

Inpatient Discharges

	Discharges				Regional % Change		Statewide % Change	
	2009	2010	2011	2012	2011-2012	2009-2012	2011-2012	2009-2012
CommCare	221	1,142	1,186	1,196	0.8%	441.2%	0.9%	28.0%
Commercial	11,930	11,874	11,945	11,128	-6.8%	-6.7%	-4.5%	-10.9%
Medicaid	10,290	10,233	11,104	10,664	-4.0%	3.6%	1.8%	4.3%
Medicare	22,935	24,913	27,668	25,293	-8.6%	10.3%	-4.1%	-0.7%
Other Payers*	1,532	1,608	1,834	1,859	1.4%	21.3%	0.4%	2.8%
Total	46,908	49,770	53,737	50,140	-6.7%	6.9%	-2.9%	-3.0%

Emergency Department Discharges

	Discharges				Regional % Change		Statewide % Change	
	2009	2010	2011	2012	2011-2012	2009-2012	2011-2012	2009-2012
CommCare	1,368	7,381	6,944	7,196	3.6%	426.0%	-0.9%	31.1%
Commercial	44,367	40,471	38,725	37,634	-2.8%	-15.2%	-5.1%	-14.6%
Medicaid	68,565	66,683	65,512	69,081	5.4%	0.8%	9.3%	13.4%
Medicare	28,529	29,245	30,555	32,565	6.6%	14.1%	4.8%	13.7%
Other Payers*	25,044	24,911	25,129	25,433	1.2%	1.6%	-0.3%	-1.7%
Total	167,873	168,691	166,865	171,909	3.0%	2.4%	1.6%	0.7%

Observation Stay Discharges

	Discharges				Regional % Change		Statewide % Change	
	2009	2010	2011	2012	2011-2012	2009-2012	2011-2012	2009-2012
CommCare	57	236	170	294	72.9%	415.8%	23.9%	65.5%
Commercial	2,412	2,469	2,280	2,658	16.6%	10.2%	3.1%	-0.1%
Medicaid	1,866	1,573	1,695	2,234	31.8%	19.7%	8.7%	25.4%
Medicare	2,720	2,728	2,400	3,817	59.0%	40.3%	24.6%	42.7%
Other Payers*	335	327	293	428	46.1%	27.8%	8.4%	21.6%
Total	7,390	7,333	6,838	9,431	37.9%	27.6%	12.2%	20.3%

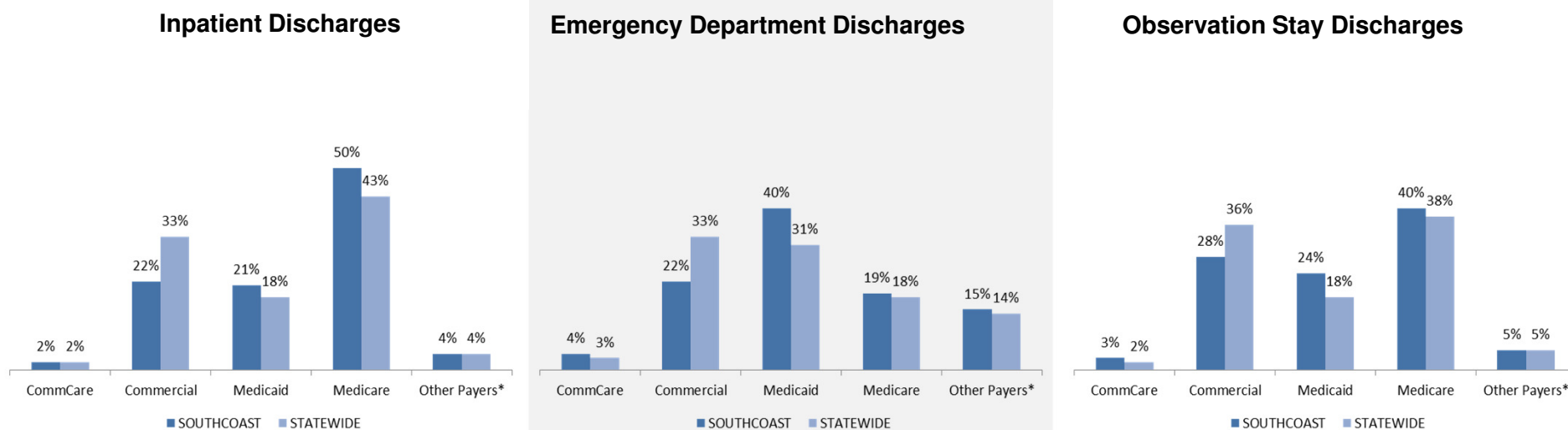
*Other payers include automobile insurance, Health Safety Net, self-pay, workman's compensation and discharges missing payer information.

Notes: The payer type is derived using the primary payer information reported by the hospital at the time of patient discharge and may change upon payment by the insurer or payer. CommCare utilization may also include discharges for members covered by the CommCare Bridge program.

Please note:
Trends in total discharges by payer type may be the result of changes in the number of members enrolled in each payer type category.

Percentage of Discharges by Payer Type (FY2012) for the Southcoast

The payer type is derived using the primary payer information reported by the hospital at the time of patient discharge and may change upon payment by the insurer or payer. Trends in total discharges by payer type may be the result of changes in the number of members enrolled in each payer type category. CommCare utilization may also include discharges for members covered by the CommCare Bridge program.



*Other payers include automobile insurance, Health Safety Net, self-pay, workman's compensation and discharges missing payer information.

Discharges by Demographic Information (Southcoast vs. Statewide FY2012)

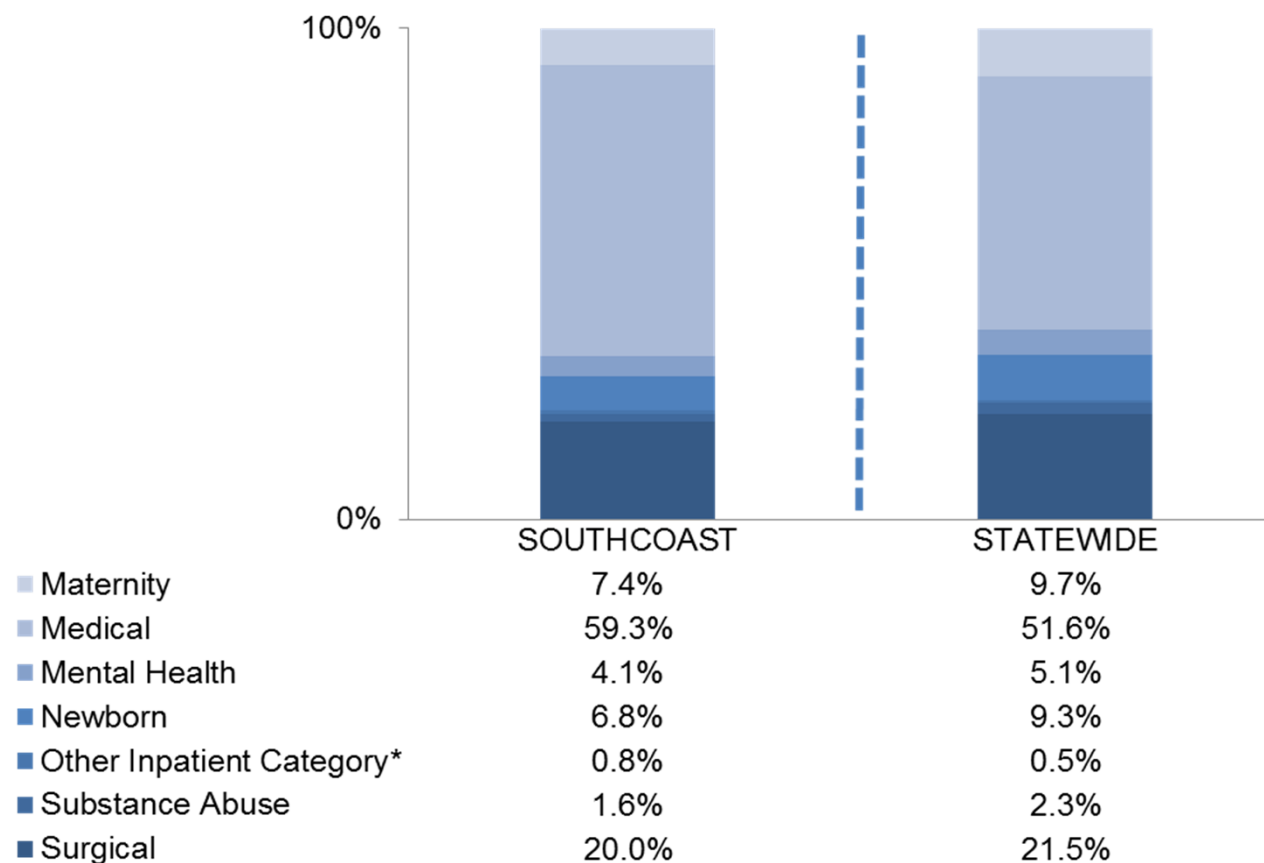
Age

	Inpatient Discharges			Emergency Department Discharges			Observation Stay Discharges		
	Regional		Statewide Comparison	Regional		Statewide Comparison	Regional		Statewide Comparison
Age (years)	#	%	%	#	%	%	#	%	%
0-19	5,374	10.7%	14.6%	37,067	21.6%	22.8%	746	7.9%	9.9%
20-44	10,625	21.2%	22.6%	79,696	46.4%	41.6%	2,226	23.6%	23.4%
45-64	13,581	27.1%	25.0%	37,162	21.6%	23.4%	3,491	37.0%	32.1%
65-84	14,970	29.9%	27.3%	14,047	8.2%	9.6%	2,283	24.2%	25.5%
85+	5,590	11.1%	10.4%	3,937	2.3%	2.8%	685	7.3%	9.0%

Race and Hispanic or Latino Ethnicity

	Inpatient Discharges			Emergency Department Discharges			Observation Stay Discharges		
	Regional		Statewide Comparison	Regional		Statewide Comparison	Regional		Statewide Comparison
Race	#	%	%	#	%	%	#	%	%
Asian	277	0.6%	2.8%	1,089	0.6%	2.0%	50	0.5%	2.0%
Black/ African American	1,913	3.8%	7.6%	10,981	6.4%	11.4%	405	4.3%	9.8%
Other Races	1,672	3.3%	5.9%	8,902	5.2%	10.8%	415	4.4%	6.9%
Unknown/not specified	4,452	8.9%	4.9%	15,458	9.0%	4.0%	676	7.2%	4.1%
White	41,826	83.4%	78.9%	135,479	78.8%	71.9%	7,885	83.6%	77.1%
Ethnicity									
Hispanic or Latino	2,738	5.5%	8.2%	17,740	10.3%	15.0%	667	7.1%	9.7%

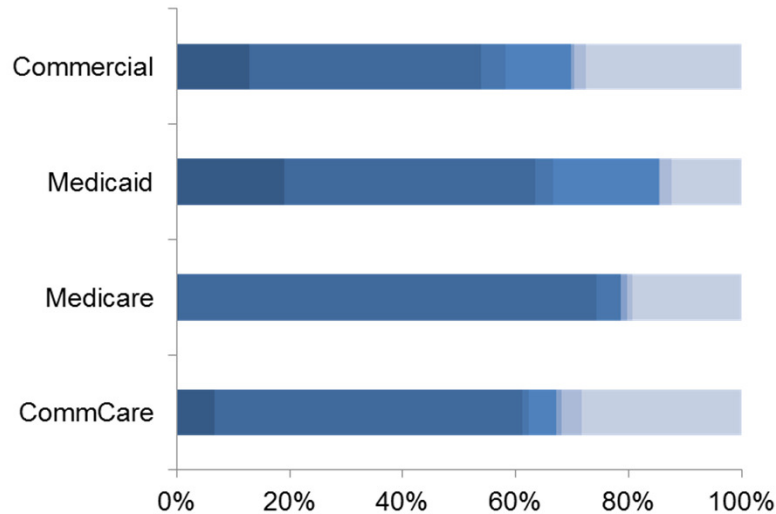
Inpatient Discharges by Inpatient Service Categories (Southcoast vs. Statewide FY2012)



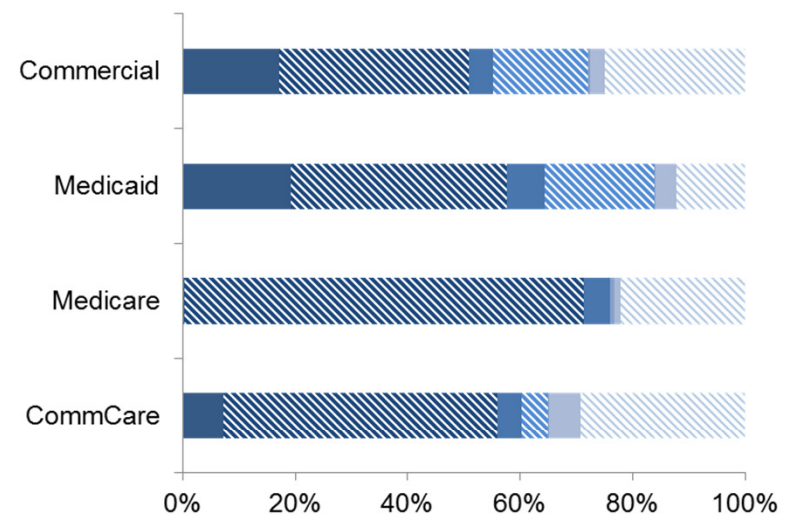
*Other Inpatient Category includes discharges that do not fall into one of the other major categories. Discharges in this category include procedures such as bone marrow transplants.

Percentage of Inpatient Discharges by Payer Type and Service Category (Southcoast vs. Statewide FY2012)

Southcoast



Statewide



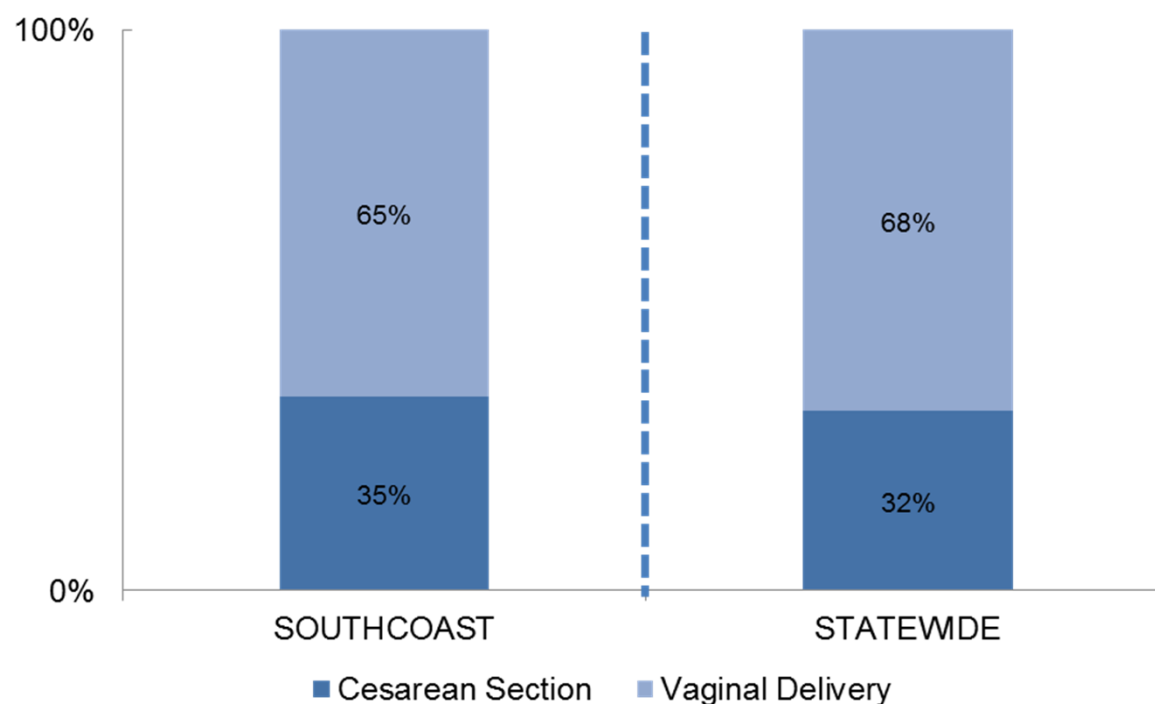
	CommCare	Medicare	Medicaid	Commercial
■ Maternity	6.6%	0.4%	19.0%	12.9%
■ Medical	54.5%	73.9%	44.6%	41.0%
■ Mental Health	1.3%	4.4%	3.1%	4.2%
■ Newborn	4.8%	0.0%	18.8%	11.7%
■ Other Inpatient Category*	0.8%	1.2%	0.2%	0.5%
■ Substance Abuse	3.6%	0.8%	2.0%	2.1%
■ Surgical	28.3%	19.4%	12.4%	27.5%

	CommCare	Medicare	Medicaid	Commercial
■ Maternity	7.3%	0.3%	19.3%	17.3%
■ Medical	48.7%	71.1%	38.4%	33.7%
■ Mental Health	4.3%	4.7%	6.7%	4.4%
■ Newborn	4.7%	0.0%	19.5%	16.9%
■ Other Inpatient Category*	0.3%	0.7%	0.2%	0.3%
■ Substance Abuse	5.5%	1.1%	3.7%	2.6%
■ Surgical	29.2%	22.2%	12.2%	24.9%

*Other Inpatient Category includes discharges that do not fall into one of the other major categories. Discharges in this category include procedures such as bone marrow transplants.

Notes: The payer type is derived using the primary payer information reported by the hospital at the time of patient discharge and may change upon payment by the insurer or payer. Trends in total discharges by payer type may be the result of changes in the number of members enrolled in each payer type category. CommCare utilization may also include discharges for members covered by the CommCare Bridge program.

Percentage of Inpatient Delivery Discharges by Method of Delivery (Southcoast vs. Statewide FY2012)



Top 10 MS-DRGs by Number of Inpatient Discharges (FY2012) for the Southcoast

MS-DRG	Title	Discharges	Average Charges	ALOS	% of Regional Discharges	Statewide % Comparison
795	Normal newborn	2,365	\$2,605	2.5	4.7%	5.9%
775	Vaginal delivery w/o complicating diagnoses	1,870	\$7,599	2.4	3.7%	4.9%
392	Esophagitis, gastroent & misc digest disorders w/o MCC	1,549	\$10,838	3.3	3.1%	2.7%
885	Psychoses	1,516	\$14,777	9.1	3.0%	3.8%
470	Major joint replacement or reattachment of lower extremity w/o MCC	1,120	\$36,934	3.5	2.2%	2.8%
603	Cellulitis w/o MCC	1,073	\$10,076	4.0	2.1%	1.6%
871	Septicemia or severe sepsis w/o MV 96+ hours w MCC	980	\$26,982	7.3	2.0%	1.6%
766	Cesarean section w/o CC/MCC	810	\$9,731	3.7	1.6%	1.7%
190	Chronic obstructive pulmonary disease w MCC	807	\$16,552	5.6	1.6%	0.8%
690	Kidney & urinary tract infections w/o MCC	684	\$11,452	4.0	1.4%	1.3%

Top 10 Principal Diagnosis Codes by Number of Emergency Department Discharges (FY2012) for the Southcoast

ICD-9 Diagnosis Code	Title	Discharges	Average Charges	% of Regional Discharges	Statewide % Comparison
789	Other symptoms involving abdomen and pelvis	9,560	\$2,367	5.6%	5.0%
780	General symptoms	6,852	\$1,802	4.0%	4.5%
786	Symptoms involving respiratory system and other chest symptoms	6,551	\$2,187	3.8%	4.4%
724	Other and unspecified disorders of back	5,498	\$1,159	3.2%	3.0%
847	Sprains and strains of other and unspecified parts of back	4,308	\$1,293	2.5%	2.2%
682	Other cellulitis and abscess	3,997	\$1,095	2.3%	2.4%
784	Symptoms involving head and neck	3,951	\$1,677	2.3%	2.5%
787	Symptoms involving digestive system	3,760	\$1,378	2.2%	2.1%
845	Sprains and strains of ankle and foot	3,062	\$865	1.8%	1.5%
599	Other disorders of urethra and urinary tract	3,004	\$1,443	1.7%	1.6%

Top 10 Principal Diagnosis Codes by Number of Observation Stay Discharges (FY2012) for the Southcoast

ICD-9 Diagnosis Code	Title	Discharges	Average Charges	% of Regional Discharges	Statewide % Comparison
786	Symptoms involving respiratory system and other chest symptoms	2,809	\$7,618	29.8%	21.8%
780	General symptoms	717	\$7,855	7.6%	7.9%
789	Other symptoms involving abdomen and pelvis	395	\$7,601	4.2%	3.1%
276	Disorders of fluid, electrolyte, and acid-base balance	230	\$6,248	2.4%	2.1%
414	Other forms of chronic ischemic heart disease	181	\$19,371	1.9%	1.3%
427	Cardiac dysrhythmias	171	\$17,316	1.8%	2.3%
787	Symptoms involving digestive system	118	\$7,428	1.3%	1.3%
493	Asthma	116	\$5,216	1.2%	1.3%
648	Other current conditions in the mother classifiable elsewhere, but complicating pregnancy, childbirth	103	\$3,216	1.1%	1.3%
250	Diabetes mellitus	96	\$7,143	1.0%	0.9%

ACUTE CARE HOSPITAL UTILIZATION TRENDS IN MASSACHUSETTS FY2009- 2012

MASSACHUSETTS RESIDENTS

WESTERN MA



Introduction

The Center for Health Information and Analysis (CHIA) is publishing these inpatient, emergency department, and observation stay utilization statistics of Massachusetts residents who have been discharged from Massachusetts acute care hospitals for the period beginning in Hospital Fiscal Year (FY) 2009 through 2012. In addition to a statewide report, 8 regional analyses were conducted based on combined Hospital Service Areas.

Each report includes demographic information for the region based on data from the American Community Survey. Differences in utilization may be driven by regional demographics such as age, race, ethnicity, and income.

These charts and tables can be used in conjunction with the associated data books. CHIA will monitor trends outlined in this report and update with additional years of data as it becomes available.

This analysis was produced using CHIA's Acute Hospital Case Mix Databases which are comprised of patient level discharge data submitted by Massachusetts acute hospitals prior to payment by a public payer or private insurer.

To learn more about the data and process used in the development of this report, please see the technical appendix.

REGIONAL REPORTING

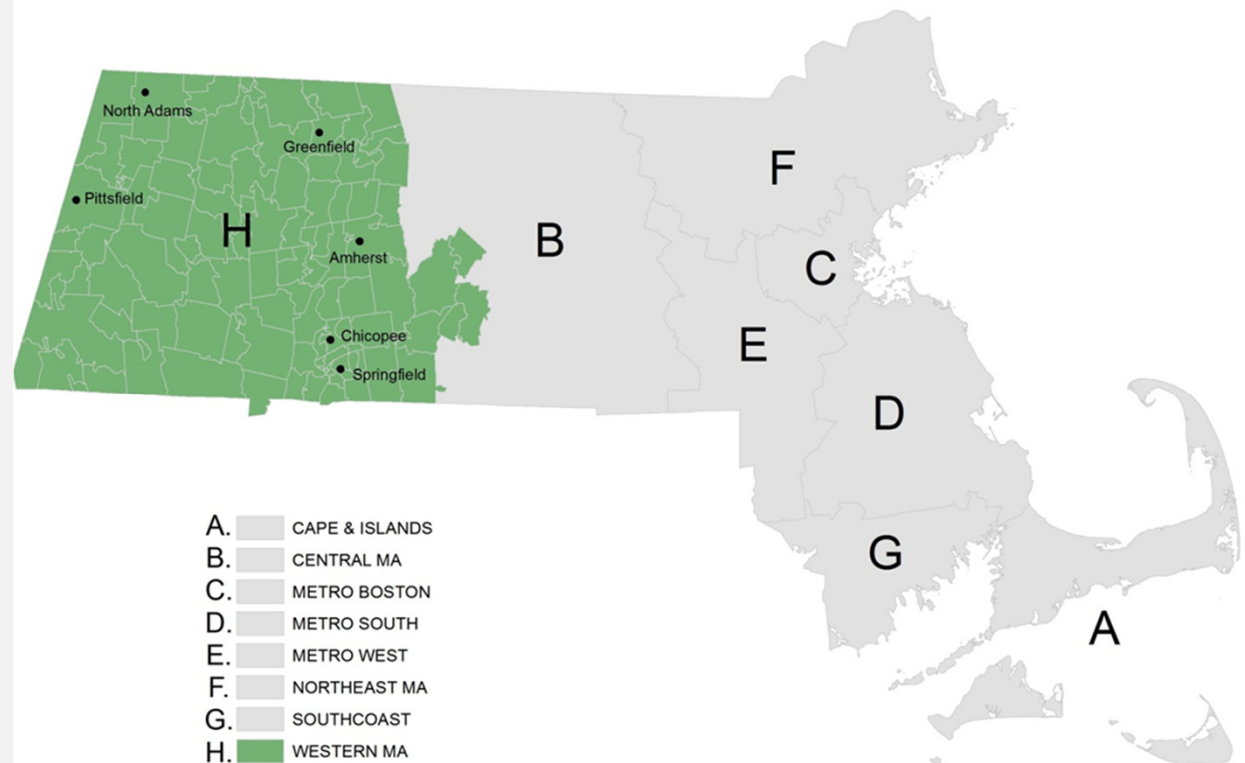
WESTERN MA



Western MA

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- [Population at a Glance](#)
- [Acute Hospital Utilization Trends](#)
 - [Acute Hospital Discharges by Payer Type](#)
 - [Discharges by Demographic Information](#)
 - [Inpatient Discharges by Inpatient Service Categories](#)
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 - [Top 10 MS-DRG by Number of Inpatient Discharges](#)
 - [Top 10 Principal Diagnosis Codes by Number of Emergency Department Discharges](#)
 - [Top 10 Principal Diagnosis Codes by Number of Observation Stay Discharges](#)



Key Findings for Western MA*

Regional Demographics

- Western MA had the second lowest regional mean household income (\$67,731) and the second highest percentage of the population below the poverty level at 14.2%.
- Western MA had the highest regional percentage of individuals identified as Hispanic or Latino at 13.6%.

Acute Hospital Utilization

- Combined, inpatient discharges for Mental Health and Substance Abuse services represented 12.7% of inpatient discharges in Western MA, compared to the statewide percentage of 7.4%.
- Over a quarter of emergency department discharges in Western MA were for individuals identified as Hispanic or Latino compared to 15.0% statewide.
- Western MA had a lower percentage of Cesarean section delivery discharges at 29.2% compared to the statewide percentage of 31.9%.

*All key findings are based on 2012 data unless otherwise indicated.

Notes: The payer type is derived using the primary payer information reported by the hospital at the time of patient discharge and may change upon payment by the insurer or payer.

Population at a Glance for Western MA



Demographics*		Western MA	Statewide
Total Population		819,572 (12.5% of the statewide population)	6,560,595
Gender			
	<i>Male</i>	47.9%	48.4%
	<i>Female</i>	52.1%	51.6%
Age			
	<i>0-19</i>	25.5%	24.7%
	<i>20-44</i>	31.4%	33.8%
	<i>45-64</i>	28.3%	27.7%
	<i>65-84</i>	12.3%	11.7%
	<i>85+</i>	2.6%	2.2%
Race			
	<i>White</i>	83.8%	81.0%
	<i>Black/African American</i>	5.9%	6.8%
	<i>Asian</i>	2.4%	5.4%
	<i>Other**</i>	5.7%	4.2%
	<i>Two or More Races</i>	2.2%	2.6%
Ethnicity			
	<i>Hispanic or Latino</i>	13.6%	9.6%
Income			
	<i>Mean Household Income</i>	\$67,731	\$89,965
	<i>Below Poverty Level</i>	14.2%	10.6%

*Source: American Community Survey 5-year Estimate (2008-2012) U.S. Department of Commerce United States Census Bureau <http://factfinder2.census.gov>

**Includes Native and Pacific Islander and American Indian/Alaskan Native

Acute Care Hospital Utilization Trends in Massachusetts FY2009-2012

Acute Hospital Utilization Trends (FY2009-2012) for Western MA

Discharges

	Discharges				Regional % Change		Statewide % Change	
	2009	2010	2011	2012	2011-2012	2009-2012	2011-2012	2009-2012
Inpatient Discharges	101,816	100,027	96,994	97,783	0.8%	-4.0%	-2.9%	-3.0%
Emergency Department Discharges	357,847	355,933	350,356	349,575	-0.2%	-2.3%	1.6%	0.7%
Observation Stay Discharges	18,989	21,594	23,417	23,634	0.9%	24.5%	12.2%	20.3%
Total	478,652	477,554	470,767	470,992	0.0%	-1.6%	1.0%	0.7%

Regional Discharges as a Percentage of Statewide Discharges*

	2009	2010	2011	2012
% of Statewide Inpatient Discharges	12.6%	12.4%	12.0%	12.5%
% of Statewide Emergency Department Discharges	14.9%	14.8%	14.7%	14.4%
% of Statewide Observation Stay Discharges	12.6%	13.7%	14.5%	13.1%
% of Statewide Total Combined Discharges	14.2%	14.2%	14.1%	13.9%

*This region's population represents 12.5% of the statewide population.

Discharge Trends by Payer Type (FY2009-2012) for Western MA

Inpatient Discharges

	Discharges				Regional % Change		Statewide % Change	
	2009	2010	2011	2012	2011-2012	2009-2012	2011-2012	2009-2012
CommCare	1,918	1,768	1,546	1,835	18.7%	-4.3%	0.9%	28.0%
Commercial	27,601	27,587	26,819	25,844	-3.6%	-6.4%	-4.5%	-10.9%
Medicaid	24,345	23,179	21,920	21,937	0.1%	-9.9%	1.8%	4.3%
Medicare	43,442	42,987	42,287	43,785	3.5%	0.8%	-4.1%	-0.7%
Other Payers*	4,510	4,506	4,422	4,382	-0.9%	-2.8%	0.4%	2.8%
Total	101,816	100,027	96,994	97,783	0.8%	-4.0%	-2.9%	-3.0%

Emergency Department Discharges

	Discharges				Regional % Change		Statewide % Change	
	2009	2010	2011	2012	2011-2012	2009-2012	2011-2012	2009-2012
CommCare	10,442	11,954	12,537	12,858	2.6%	23.1%	-0.9%	31.1%
Commercial	102,584	92,258	87,445	83,709	-4.3%	-18.4%	-5.1%	-14.6%
Medicaid	127,610	130,848	129,210	129,893	0.5%	1.8%	9.3%	13.4%
Medicare	64,821	66,692	68,450	71,983	5.2%	11.0%	4.8%	13.7%
Other Payers*	52,390	54,181	52,714	51,132	-3.0%	-2.4%	-0.3%	-1.7%
Total	357,847	355,933	350,356	349,575	-0.2%	-2.3%	1.6%	0.7%

Observation Stay Discharges

	Discharges				Regional % Change		Statewide % Change	
	2009	2010	2011	2012	2011-2012	2009-2012	2011-2012	2009-2012
CommCare	429	538	527	527	0.0%	22.8%	23.9%	65.5%
Commercial	6,142	6,382	6,278	6,489	3.4%	5.6%	3.1%	-0.1%
Medicaid	3,773	4,339	4,832	4,709	-2.5%	24.8%	8.7%	25.4%
Medicare	7,839	9,423	10,710	10,925	2.0%	39.4%	24.6%	42.7%
Other Payers*	806	912	1,070	984	-8.0%	22.1%	8.4%	21.6%
Total	18,989	21,594	23,417	23,634	0.9%	24.5%	12.2%	20.3%

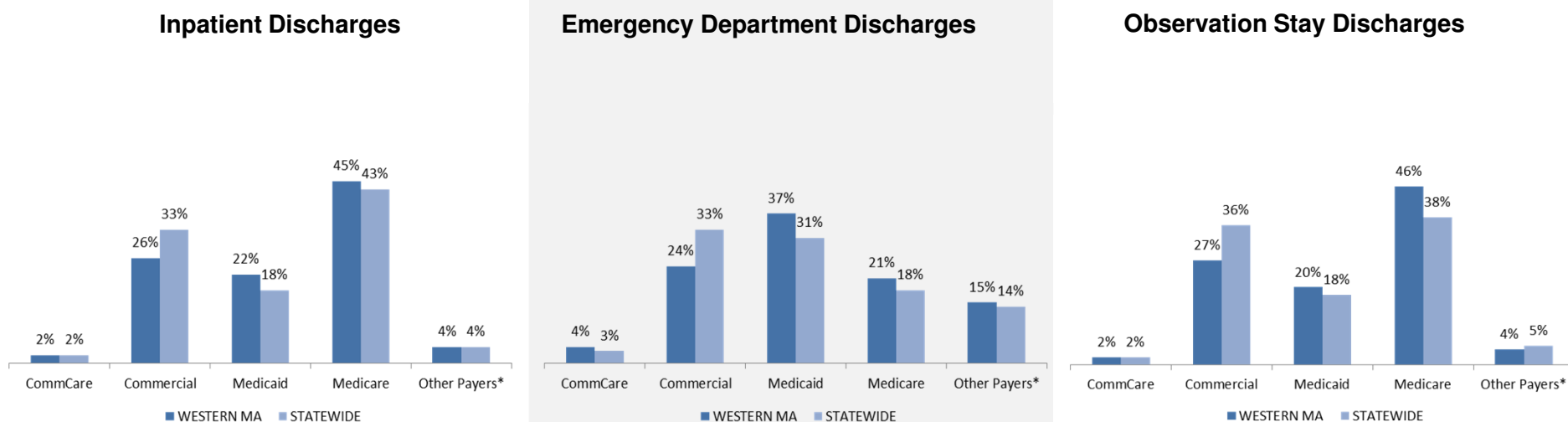
*Other payers include automobile insurance, Health Safety Net, self-pay, workman's compensation and discharges missing payer information.

Notes: The payer type is derived using the primary payer information reported by the hospital at the time of patient discharge and may change upon payment by the insurer or payer. CommCare utilization may also include discharges for members covered by the CommCare Bridge program.

Please note:
Trends in total discharges by payer type may be the result of changes in the number of members enrolled in each payer type category.

Percentage of Discharges by Payer Type (FY2012) for Western MA

The payer type is derived using the primary payer information reported by the hospital at the time of patient discharge and may change upon payment by the insurer or payer. Trends in total discharges by payer type may be the result of changes in the number of members enrolled in each payer type category. CommCare utilization may also include discharges for members covered by the CommCare Bridge program.



*Other payers include automobile insurance, Health Safety Net, self-pay, workman's compensation and discharges missing payer information.

Discharges by Demographic Information (Western MA vs. Statewide FY2012)

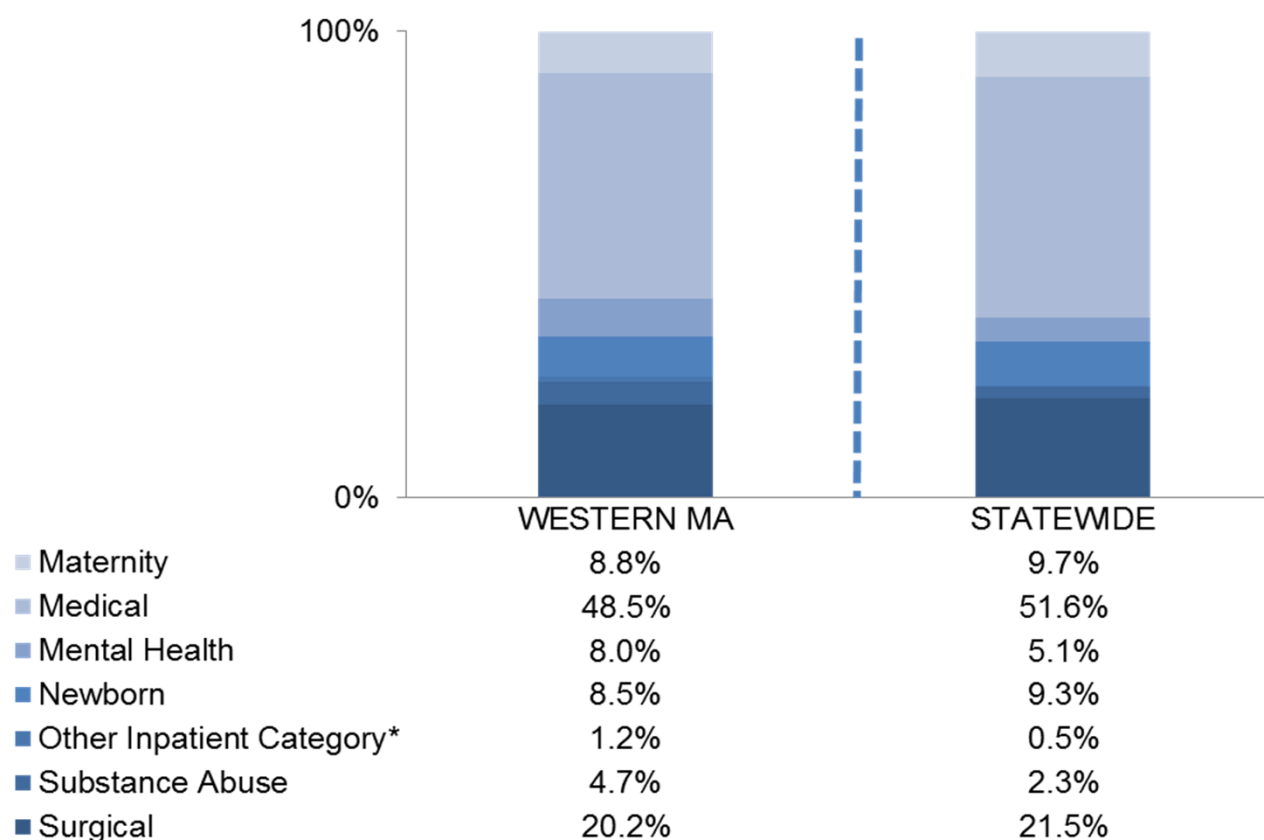
Age

	Inpatient Discharges			Emergency Department Discharges			Observation Stay Discharges		
	Regional		Statewide Comparison	Regional		Statewide Comparison	Regional		Statewide Comparison
Age (years)	#	%	%	#	%	%	#	%	%
0-19	13,381	13.7%	14.6%	73,637	21.1%	22.8%	2,205	9.3%	9.9%
20-44	23,636	24.2%	22.6%	151,487	43.3%	41.6%	4,653	19.7%	23.4%
45-64	25,175	25.7%	25.0%	81,735	23.4%	23.4%	7,288	30.8%	32.1%
65-84	25,304	25.9%	27.3%	33,002	9.4%	9.6%	6,702	28.4%	25.5%
85+	10,287	10.5%	10.4%	9,714	2.8%	2.8%	2,786	11.8%	9.0%

Race and Hispanic or Latino Ethnicity

	Inpatient Discharges			Emergency Department Discharges			Observation Stay Discharges		
	Regional		Statewide Comparison	Regional		Statewide Comparison	Regional		Statewide Comparison
Race	#	%	%	#	%	%	#	%	%
Asian	909	0.9%	2.8%	2,311	0.7%	2.0%	174	0.7%	2.0%
Black/African American	6,600	6.7%	7.6%	31,668	9.1%	11.4%	1,881	8.0%	9.8%
Other Races	5,312	5.4%	5.9%	48,806	14.0%	10.8%	1,450	6.1%	6.9%
Unknown/not specified	4,957	5.1%	4.9%	12,343	3.5%	4.0%	714	3.0%	4.1%
White	80,005	81.8%	78.9%	254,447	72.8%	71.9%	19,415	82.1%	77.1%
Ethnicity									
Hispanic or Latino	13,532	13.8%	8.2%	89,509	25.6%	15.0%	3,129	13.2%	9.7%

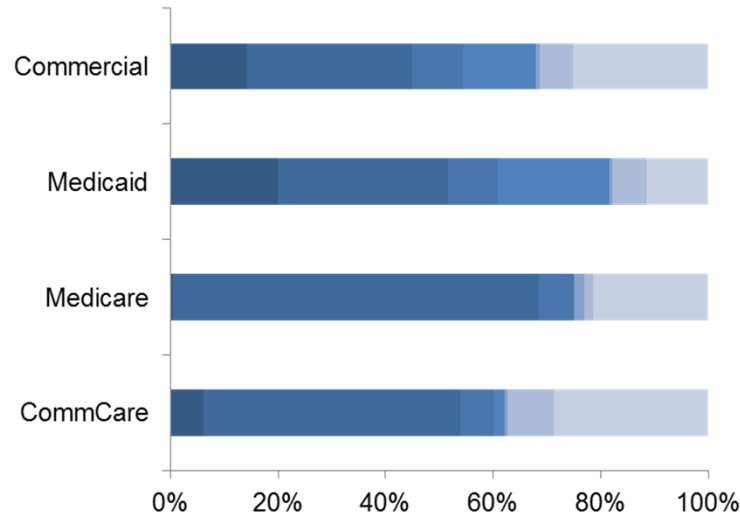
Inpatient Discharges by Inpatient Service Categories (Western MA vs. Statewide FY2012)



*Other Inpatient Category includes discharges that do not fall into one of the other major categories. Discharges in this category include procedures such as bone marrow transplants.

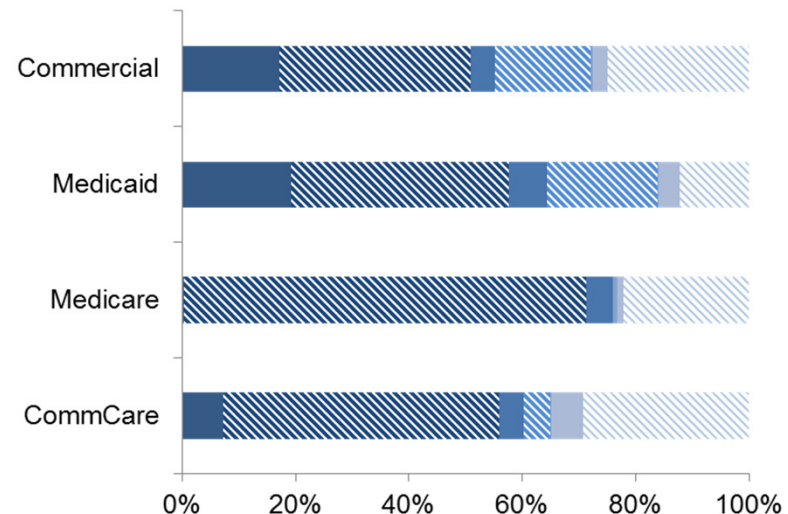
Percentage of Inpatient Discharges by Payer Type and Service Category (Western MA vs. Statewide FY2012)

Western MA



	CommCare	Medicare	Medicaid	Commercial
■ Maternity	6.1%	0.5%	20.0%	14.2%
■ Medical	47.8%	68.0%	31.6%	30.7%
■ Mental Health	6.1%	6.4%	9.1%	9.5%
■ Newborn	2.2%	0.0%	20.9%	13.5%
■ Other Inpatient Category*	0.5%	1.9%	0.5%	0.7%
■ Substance Abuse	8.6%	1.7%	6.4%	6.2%
■ Surgical	28.7%	21.4%	11.5%	25.1%

Statewide

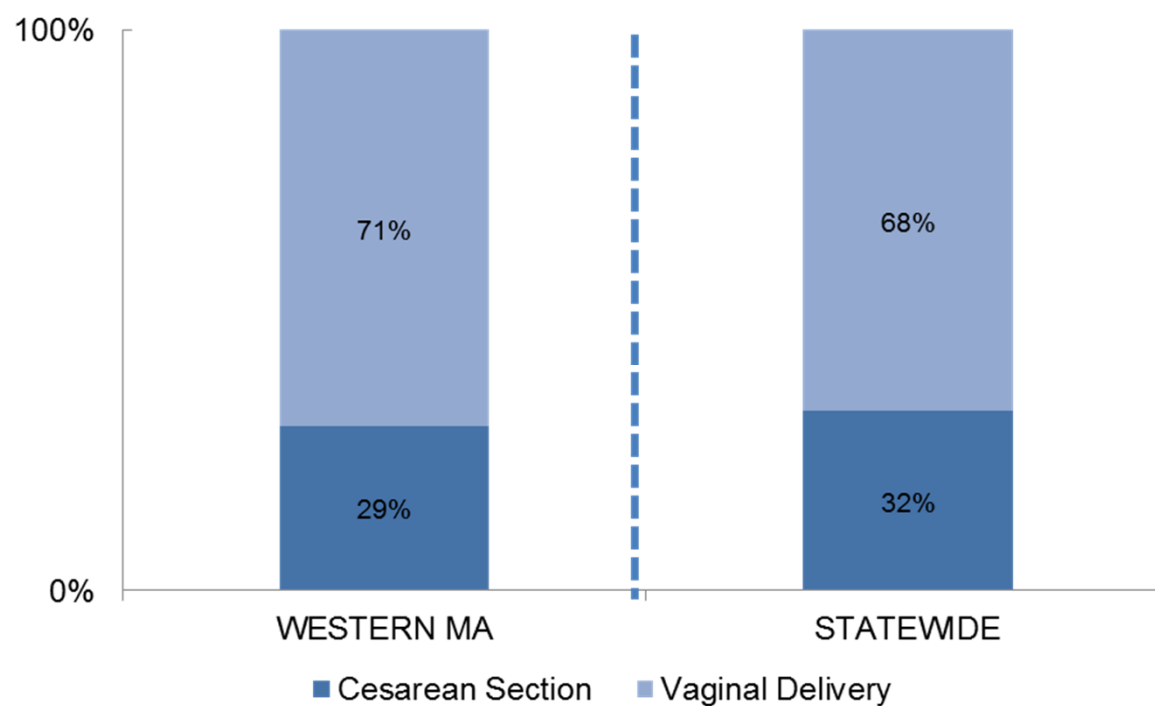


	CommCare	Medicare	Medicaid	Commercial
■ Maternity	7.3%	0.3%	19.3%	17.3%
▨ Medical	48.7%	71.1%	38.4%	33.7%
■ Mental Health	4.3%	4.7%	6.7%	4.4%
▨ Newborn	4.7%	0.0%	19.5%	16.9%
■ Other Inpatient Category*	0.3%	0.7%	0.2%	0.3%
■ Substance Abuse	5.5%	1.1%	3.7%	2.6%
▨ Surgical	29.2%	22.2%	12.2%	24.9%

*Other Inpatient Category includes discharges that do not fall into one of the other major categories. Discharges in this category include procedures such as bone marrow transplants.

Notes: The payer type is derived using the primary payer information reported by the hospital at the time of patient discharge and may change upon payment by the insurer or payer. Trends in total discharges by payer type may be the result of changes in the number of members enrolled in each payer type category. CommCare utilization may also include discharges for members covered by the CommCare Bridge program.

Percentage of Inpatient Delivery Discharges by Method of Delivery (Western MA vs. Statewide FY2012)



Top 10 MS-DRGs by Number of Inpatient Discharges (FY2012) for Western MA

MS-DRG	Title	Discharges	Average Charges	ALOS	% of Regional Discharges	Statewide % Comparison
885	Psychoses	5,516	\$19,501	10.0	5.6%	3.8%
795	Normal newborn	5,452	\$2,693	2.3	5.6%	5.9%
775	Vaginal delivery w/o complicating diagnoses	4,707	\$9,138	2.2	4.8%	4.9%
470	Major joint replacement or reattachment of lower extremity w/o MCC	2,795	\$36,408	3.4	2.9%	2.8%
895	Alcohol/drug abuse or dependence w rehabilitation therapy	2,099	\$6,409	5.5	2.1%	0.4%
392	Esophagitis, gastroent & misc digest disorders w/o MCC	2,077	\$11,916	3.3	2.1%	2.7%
794	Neonate w other significant problems	1,610	\$4,044	2.8	1.6%	2.1%
871	Septicemia or severe sepsis w/o MV 96+ hours w MCC	1,607	\$26,369	6.0	1.6%	1.6%
603	Cellulitis w/o MCC	1,557	\$10,280	3.4	1.6%	1.6%
766	Cesarean section w/o CC/MCC	1,470	\$14,774	3.7	1.5%	1.7%

Top 10 Principal Diagnosis Codes by Number of Emergency Department Discharges (FY2012) for Western MA

ICD-9 Diagnosis Code	Title	Discharges	Average Charges	% of Regional Discharges	Statewide % Comparison
789	Other symptoms involving abdomen and pelvis	21,792	\$2,467	6.2%	5.0%
780	General symptoms	18,368	\$1,375	5.3%	4.5%
786	Symptoms involving respiratory system and other chest symptoms	16,513	\$1,807	4.7%	4.4%
724	Other and unspecified disorders of back	12,232	\$919	3.5%	3.0%
847	Sprains and strains of other and unspecified parts of back	9,799	\$1,128	2.8%	2.2%
784	Symptoms involving head and neck	9,260	\$1,375	2.6%	2.5%
787	Symptoms involving digestive system	7,583	\$1,472	2.2%	2.1%
682	Other cellulitis and abscess	7,096	\$1,037	2.0%	2.4%
873	Other open wound of head	6,605	\$1,355	1.9%	2.0%
493	Asthma	6,163	\$1,234	1.8%	1.5%

Top 10 Principal Diagnosis Codes by Number of Observation Stay Discharges (FY2012) for Western MA

ICD-9 Diagnosis Code	Title	Discharges	Average Charges	% of Regional Discharges	Statewide % Comparison
786	Symptoms involving respiratory system and other chest symptoms	5,366	\$7,939	22.7%	21.8%
780	General symptoms	1,926	\$8,844	8.1%	7.9%
644	Early or threatened labor	574	\$1,217	2.4%	2.4%
789	Other symptoms involving abdomen and pelvis	560	\$10,594	2.4%	3.1%
427	Cardiac dysrhythmias	550	\$16,429	2.3%	2.3%
276	Disorders of fluid, electrolyte, and acid-base balance	543	\$8,207	2.3%	2.1%
493	Asthma	446	\$6,562	1.9%	1.3%
599	Other disorders of urethra and urinary tract	282	\$9,412	1.2%	1.0%
491	Chronic bronchitis	273	\$8,919	1.2%	0.8%
540	Acute appendicitis	268	\$17,936	1.1%	0.9%